Bilateral monopoly in the shipbuilding industry: A study of wage-rate determination

Gregory Woodhead
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Bilateral monopoly in the shipbuilding industry: A study of wage-rate determination

Abstract
The primary goal of this dissertation is to explicate the dynamic factors that influence the outcome of collective bargaining when a strong union with monopoly power over the supply of labor faces an employer exercising monopsony power over the demand for labor. A significant characteristic of the bilateral monopoly model is the indeterminacy of both the wage level and the quantity of labor employed. Each party sets bounds on the range of possible outcomes, but the final outcome is determined by the process of collective bargaining. The research methodology requires an examination of wage-rate determination in the U.S. shipbuilding industry with two different but equal approaches: (1) a historical case study of the 1985 wage settlement at Bath Iron Works, and (2) an econometric model of wage-rate determination. By including both qualitative and quantitative methods of research, a clearer picture emerges of how well the bilateral monopoly model explains the determination of wages in the shipbuilding industry. The case study focuses on the tactics and strategies which contribute to the enhancement or diminution of "bargaining power" throughout the collective bargaining process. The econometric model quantifies the wage settlements of individual union contracts and relates these to both local labor market conditions and the bargaining environment which prevailed during the life of the previous contract and during the bargaining period. The econometric model tests: (1) whether the negotiated changes in wages in the U.S. shipbuilding industry can be explained by the movement of economic variables over time; and (2) the extent to which local labor market forces, consumer price inflation, and bargaining environment affect wage settlements.

Keywords
Economics, Labor

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Bilateral monopoly in the shipbuilding industry: A study of wage-rate determination

Woodhead, Gregory, Ph.D.

University of New Hampshire, 1990

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BILATERAL MONOPOLY IN THE SHIPBUILDING INDUSTRY:
A STUDY OF WAGE-RATE DETERMINATION

BY

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DISSERTATION

Submitted to the University of New Hampshire
in Partial Fulfillment of
the Requirements for the Degree of

Doctor of Philosophy
in
Economics

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May 1, 1990  
Date
This dissertation is dedicated to my mother and father. . . . by their daily example, they demonstrate the meaning of unconditional love.
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ABSTRACT

BILATERAL MONOPOLY IN THE SHIPBUILDING INDUSTRY:
A STUDY OF WAGE-RATE DETERMINATION

by

Gregory Woodhead
University of New Hampshire, May, 1990

The primary goal of this dissertation is to explicate the dynamic factors that influence the outcome of collective bargaining when a strong union with monopoly power over the supply of labor faces an employer exercising monopsony power over the demand for labor. A significant characteristic of the bilateral monopoly model is the indeterminacy of both the wage level and the quantity of labor employed. Each party sets bounds on the range of possible outcomes, but the final outcome is determined by the process of collective bargaining. The research methodology requires an examination of wage-rate determination in the U.S. shipbuilding industry with two different but equal approaches: (1) a historical case study of the 1985 wage settlement at Bath Iron Works, and (2) an econometric model of wage-rate determination. By including both qualitative and quantitative methods of research, a clearer picture emerges of how well the bilateral monopoly model explains the determination of wages in the shipbuilding industry. The case study
focuses on the tactics and strategies which contribute to the enhancement or diminution of "bargaining power" throughout the collective bargaining process. The econometric model quantifies the wage settlements of individual union contracts and relates these to both local labor market conditions and the bargaining environment which prevailed during the life of the previous contract and during the bargaining period. The econometric model tests: (1) whether the negotiated changes in wages in the U.S. shipbuilding industry can be explained by the movement of economic variables over time; and (2) the extent to which local labor market forces, consumer price inflation, and bargaining environment affect wage settlements.
CHAPTER I

INTRODUCTION

I fear when the economic theorist turns to the general problem of wage determination and labor economics, his voice becomes muted and his speech halting.... (Samuelson 1966, 1557).

The primary goal of the dissertation is to explicate the dynamic factors that influence the outcome of a negotiation of a labor contract where a strong union with monopoly power over the supply of labor faces an employer exercising monopsony power over the demand for labor. Monopsony power exists when a single employer is the primary source of employment for specific labor skills within a labor market. Monopoly power of the union is enhanced by "exclusive unionism" which restricts the labor supply for a particular grade of labor by limiting entry into the occupation itself, and by "inclusive" union techniques such as negotiating union shops\(^1\) to gain full control over the existing labor pool (McConnell and Brue 1986, 157).

The theory of bilateral monopoly as it applies to the market for labor has a long and distinguished tradition in the development of economic thought. The U.S. shipbuilding industry fits the model of bilateral monopoly as shipbuilding firms in one geographic location exercise considerable

\(^1\) In union shops, all workers must join the union within 30 days after being hired.
monopsony power over the demand for labor and trade unions possess monopoly power over the supply of labor.

Labor costs historically have constituted a large component of total costs of the production of warships. Faced with budget constraints and a desire to have a naval force of 600 ships, recent Navy policy has encouraged large private shipyards to engage in hard bargaining and to demand concessions from shipyard workers. On the other hand, shipyard workers, historically among the highest paid employees in U.S. manufacturing industries, vigorously have opposed "givebacks", especially during a period of profitability on the part of defense contractors. This fundamental conflict of interests is resolved in contract negotiations between shipbuilding firms and unions. This dissertation examines the factors that influence the settlement of labor contracts in the highly unionized U.S. shipbuilding industry.

In a bilateral monopoly situation, the desires of the employer attempting to act as a monopsonist and the aims of the union attempting to act as a monopolist are in direct conflict. Neither party has all the power, and therefore some compromise must be reached. The final wage outcome in a real bilateral bargaining situation is not predictable. Although the bilateral monopoly model can place bounds on the likely outcome of such bargaining, arriving at a specific solution requires the development of a formal model of the bargaining process.
Contents of the Dissertation

The central purpose of this dissertation is to determine what factors affect the position of a contract settlement along the range of indeterminacy in the bilateral monopoly model. The research methodology in this study requires two different approaches: (1) an econometric model of wage-rate determination in large private shipyards, and (2) a historical case study of the 1985 labor dispute and eventual settlement at Bath Iron Works.

First, the literature on bilateral monopoly, with emphasis on its application to the market for labor is reviewed. The review of 150 years of bilateral monopoly theory can be broken down into three separate phases. The first phase reveals that wages under conditions of bilateral monopoly in the labor market are indeterminate along a range in which the outcome of negotiations may fall. The second phase includes several attempts to arrive at a determinate solution for the model of bilateral monopoly. The final phase offers some refinements on the model.

In addition, the more recent literature on bargaining power in collective bargaining also is reviewed. The review of bargaining power literature indicates that power in labor negotiations has an economic element, a more subjective component, and can also be understood by employing dependency theory. The collective bargaining literature also includes a prominent theory of why strikes are not avoided.
Second, an econometric model of wage-rate determination quantifies the wage settlements of individual union contracts and relates these to both local labor market conditions and the bargaining environment which prevailed during the life of the previous contract and during the bargaining period. The econometric model tests: (1) whether the negotiated changes in wages in the U.S. shipbuilding industry can be explained by the movement of economic variables over time; and (2) the extent to which local labor market forces, consumer price inflation, and bargaining environment affect wage settlements.

Third, an ethnographic case study of a lengthy labor dispute and eventual settlement is undertaken. The goal of the case study is to develop a comprehensive overview of the factors that contributed to the occurrence and eventual settlement of the labor dispute in the summer of 1985 between a major defense contractor and builder of warships, Bath Iron Works (BIW) in Bath, Maine, and Local 6 of the Industrial Union of Marine and Shipbuilding Workers of America (IUMSWA). The case study focuses on determining which factors contribute to the enhancement or diminution of bargaining power throughout the collective bargaining process. The case study defines which party held the balance of bargaining power in 1985, and determines how it was acquired. In addition, factors which led to an extended strike are identified in order to understand better the role of the strike in the eventual settlement.
The case study is intended to extrapolate, from a single historical case of labor negotiations, variables to be included in the econometric model. The case study also reveals factors impacting on the determination of wages which cannot easily, and may never, be reduced to measurable quantities. These factors provide valuable insights, points of reference, and help explain the range of indeterminacy in the theory of bilateral monopoly. The case study is, therefore, both a complement to the regression model, and a means of examining the richness and complexity of organizational life. The two research methods are intended to complement each other in a reciprocal manner. At the same time, both methods contribute to the goal of examining how bargaining power impacts on unionized wage negotiations in one industry.
CHAPTER II

REVIEW OF THE LITERATURE

Bilateral Monopoly Theory

A significant characteristic of the bilateral monopoly model is the indeterminacy of both the wage level and the quantity of labor—neither is determined by impersonal market forces. When the monopolist is a strong union and the monopsonist is the only company hiring a particular kind of labor, then the system for determining price and quantity is collective bargaining. With a bilateral monopoly model, each participant sets bounds on the range of outcomes that may result, but the actual outcome will depend upon the bargaining skills of the parties at the bargaining table, the strengths and resources of each party, and upon other variables, such as public opinion, which are exogenous to the model.

Figure 1.
Bilateral Monopoly
Assumption of the Model:

1. Labor is the only variable input, so the $D_L = MRP_L$.
2. The employer and the union both are fully aware of the employer's demand curve and the union's supply curve.
3. The employer has monopoly power in the market for the product. This causes $D_L$ to be more inelastic than if the firm faces a competitive market.\(^1\)
4. The goal of the union is to maximize the wage rate.
   (Other $Q_L$ choices are to maximize the wage bill where $MD = 0$, or to maximize employment where $S = D$.)

Company Strategy

In order to maximize profits, if the employer has the power to enforce the price-quantity decision, the employer will set the wage at $OC$ and the quantity of labor at $OR$ where the marginal factor cost of labor, $MFC_L$, is equal to the marginal revenue product of labor, $MRP_L$. Notice that the employer's wage rate, $OC$, is determined by the supply curve for labor.

Union Strategy

In order to maximize the wage rate, if the union has the power to fix wages, it would attempt to set the wage rate at $OU$, and the quantity of labor at $OS$, where the

\(^1\) By varying the elasticities of supply and demand, Huq (1974) provides alternative outcomes for the determinate quantities of the classic textbook model. However, for each of his outcomes, the seller's price lies above and the buyer's price lies below the equilibrium price established by the interaction of the supply and demand curves. Huq warns that the underlying assumptions concerning the elasticities of the curves need to be explicitly stated (522).
marginal revenue, \( MR \), from the sale of its members' labor services is equal to their supply price, \( S_L \). Notice that the union wage rate, \( W_U \), is determined by the demand curve for labor.

Based on the usual assumptions of rational maximizing behavior, the bilateral monopoly model is unable to yield a unique prediction of the wage settlement; rather, "it is only able to delineate a range of indeterminacy within which the outcome can be expected to lie" (Sapsford 1981, 103).

The bilateral monopoly model does, however, provide a useful insight into the relationship of price agreements determined by bargaining under economic constraints where the position and shape of the supply and demand curves determine the precise objective of each party (Carter and Marshall 1976).

**Bilateral Monopoly Literature**

The theory of bilateral monopoly has a long and rich tradition in the history of economic thought.\(^2\) The following is a chronological summary of literature on bilateral monopoly as it has continued for more than 150 years. The development of the theory of bilateral monopoly began with Cournot, who in 1838 analyzed the case of two monopolists producing different commodities; although Cournot had no model of transactions between the individual buyer and seller, his case of complementary monopolists can be

\(^{2}\text{ Early in the 19th century Babbage made reference to the only existing possessor of the skill of making dolls' eyes who sells to the only manufacturer of dolls (Babbage 1832).}
considered analogous to the case of bilateral monopoly. Beginning with Menger's (1871) study, the literature on bilateral monopoly can be categorized into three distinct chronological phases which are summarized in Appendix D.

Phase I: Debate over Indeterminacy

In 1871, Menger discussed the problem of barter between two individuals trading their goods, each attempting to maximize subjective values. Menger found that price would be indeterminate within certain limits, though the price as a rule would be equally far from the possible extremes if the two parties were equally strong and skillful bargainers.

In 1881, Edgeworth presented a remarkable advance in the analysis by showing that "contract without competition is indeterminate" (20). He also delineated the range of indeterminateness by deriving "contract curves" from the utility functions of the bargaining parties. Edgeworth concluded that there would not exist, as a rule, a determinate and stable equilibrium in situations of duopoly. In 1896 Pareto arrived at the conclusion that "the problem is indeterminate because we do not know what use each of the two would make of his power" (601). Pareto felt that a determinate solution requires additional assumptions of a more factual type.

Wage-rate determination under bilateral monopoly has provided a topic for academic dispute as far back as the period of Alfred Marshall's marginal analysis. In the fifth edition of Principles (1907), Marshall wrote a passage
indicating that he accepted Edgeworth's conclusions that there were no determinate solutions. Langford Price a contemporary of Marshall at Oxford, viewed that the presence of trade unions with sufficient monopoly power rendered the conclusions of the Marshallian wage model inapplicable. Price maintained that marginal analysis could not be appropriately employed to deal with problems of bilateral monopoly where the combinations on either side were indivisible. Price suggested that the point at which wage settles is determined by bargaining power (Petridis 1979).

In the late 1920s and early 1930s some noted figures in the history of economic thought argued that a determinate and stable equilibrium can be obtained with bilateral monopoly. In Wicksell's (1925) view, "monopoly" implies a certain behavior pattern resulting in a determinate solution. Wicksell's assumptions were: That both parties know the demand curves, that they pursue only their own individual interests but do not force the other to submission, and that any deal is final for the whole period. Schumpeter (1927) claimed that if the parties do not try to force the other party "to its knees" a barter point is perfectly determined. In a similar manner, Schneider (1932) argued that a determinate and stable equilibrium can be obtained in bilateral monopoly provided the parties are peaceful profit maximizers rather than contenders for dominance who resort to bluff and economic warfare.
The first determinate theory of the bargaining process was proposed by Zeuthen in 1928 and first published in English in 1930. Zeuthen was the most explicit in contending that, in any monopolistic market structure, several varieties of practices, procedures and attitudes are possible and will determine the outcome. The essence of Zeuthen's theory is that, at each stage of the bargaining process, both players compare the alternative of holding out for their own current demand, at the risk of causing a conflict, with that of immediately accepting their opponent's latest offer. Zeuthen transformed the bargaining problem into a problem of risk and applied it to the techniques of maximization of expected utility.

Other notables such as Bowley (1928), Stackelberg (1934), who was the first to recognize the term "bilateral monopoly," and Pigou (1938) rejected the possibility of a determinate equilibrium solution.

Where, however, wage rates are settled, not by the action of free competition, but by bargaining between a workingmen's association on one side and an employers' association on the other, the rate of wage is no longer determinate at a single point. There is, on the contrary, a range of indeterminateness (Pigou 1938, 452).

Reasoning in terms of a monopolistic supplier of ore who deals with a monopsonistic producer of steel, Bowley concluded: (1) in cases where one party dictates price and the other decides quantity, the party who establishes the price
gains by far the largest share of the profit, and (2) cases involving collusion result in a simple-monopoly solution.\(^3\)

Both Nicholls (1941) and Leontief (1946) found price and quantity agreements probable in markets for industrial products, but improbable in labor markets. Fellner (1947) accepted and clarified the bilateral-monopoly solution for industrial products where output is equal to the output under simple monopoly.

Dunlop (1950) devotes a chapter to "bargaining power" in his book on wage determination under trade unions. In his analysis of bilateral monopoly, Dunlop takes into account the different combinations that result from having pure competition, monopoly, and monopsony in either the labor market or the product market. Dunlop details the theoretically possible range of solutions for thirteen cases of market conditions. According to Dunlop, the case which involves bilateral monopoly in both the labor market and the product market, "permits any of the previous combinations, depending on the results of bargaining in each of the markets" (89). In this instance, the resulting wage may be anywhere between the highest and the lowest level, with the

---

\(^3\) Fountain (1980) shows that Bowley's price leadership analysis of bilateral monopoly implicitly defines a social decision function. According to Fountain, both Sen's liberalism and Bowley's analysis of bilateral monopoly share the property that each agent in the social decision process has a sphere of choice over which he is decisive. In Fountain's opinion, "It is this property of limited-choice decisiveness that can lead, in specific instances of Sen's paradox and also in Bowley's analysis, to social decisions that are inconsistent with Pareto optimality" (809).
results in each market depending on the results in the other.

**Phase II: Attempts at Determinacy**

Machlup and Taber (1960) maintained that negotiations between separate monopolists, would in the case of intermediate products, necessarily be carried on in terms of both quantity and price, and that "the quantity agreed upon between the parties would be the same as that produced by an integrated monopolist" (111). However, they also recognized situations in which prices are negotiated by the two parties, while the quantity is left open. Such oligopolistic situations arise when one or both parties have incomplete control over quantity because they are merely agencies for a group of buyers or sellers. According to Machlup and Taber, "A trade union in its collective bargain with a monopsonistic employer will normally set only the wage rate, while the quantity of labor offered and employed is left open" (112).

Foldes (1964) presented a determinate static theory of bilateral monopoly in conditions of certainty. Foldes, who based his work on Hicks' theory, obtained his determinate solution by taking into account time preference and the use of threats to delay trade as a means of extracting

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4 Hicks' model takes explicit account of the time aspects of the potential wage conflict by examining the length of time for which each party would be willing to strike in order to get any particular wage rate. Both the employer's tendency to concede and the union's to resist are functions of the expected length of the threatened strike (Hicks 1964).
concessions. The essence of Foldes' approach is that disagreement involves delay "... and that any delay will diminish the utility of both parties" (120).

Cross (1965) was dissatisfied that Edgeworth's model of bilateral monopoly was indeterminate within a trading area where the solution depended on the bargaining abilities of the individuals. It was, in his opinion, "a thoroughly vague concept which is primarily intended to give the whole problem to the psychologists, thus absolving economics of the guilt of leaving the issue up in the air" (67). To remedy this, Cross offers a precise analysis of bargaining by means of Nash's theory with modification.\textsuperscript{5} Modifying Nash's theory to account for both the dynamic nature of the bargaining process and learning, Cross offers a dynamic theory of a convergent bargaining process, in which the parties' expectations and rate of concession determine the outcome.

De Menil (1971) also utilized Nash's theory of bargaining in order to build a model of wage determination under bilateral monopoly. De Menil finds Nash's game theory superior to alternative bargaining theories because it is derived from formal axioms concerning the behavior of rational individuals in situations of conflict. In his model, de Menil makes assumptions concerning the product-demand

\textsuperscript{5} Nash concluded that the only function which can consistently describe the outcome of the bargaining process is the one that maximizes the product of the player's utilities. Utilities are measures as increments from the point of disagreement.
curve, production function, capital supply, supply of union members and utility functions of the employer and the union. De Menil also utilizes the "wage surplus" hypothesis that makes the union's utility a function of that part of the wage bill which is union induced. In de Menil's opinion, applying Nash's theory of bargaining to a simple, static model of bilateral monopoly brings forth two fundamental characteristics of collective bargaining: (1) it is more than a question of wages and working conditions because of the ability of the union to veto by means of a strike any action of the employer; and (2) the interests of the employer and the union are in common over such areas as capital plans, the determination of employment, and pricing policy (28). De Menil's model of wage determination is explained in Chapter 7 and it provides the primary structural framework for the empirical analysis in this dissertation.

Ashenfelter and Johnson (1969) attempt to derive testable implications concerning the conditions under which labor disputes are more likely to occur. Their model recognizes three parties involved in labor-management negotiations: the management, the union leadership, and the union rank-and-file. Their model is essentially a political model of the function of a strike to examine the firm's choice between giving in to the last union demand (acceptable to the rank and file), and "taking a strike" in order to obtain a lower settlement. Their empirical research found that the
aggregate level of strike activity is behaviorally related to the degree of tightness of the labor market and previous rates of change of real wages.

Hieser (1970) provides an explicit discussion of the main gains and losses of the participants in the wage bargain. He assumes a situation of pure bilateral monopoly, with a monopolist seller of a single commodity on the one side, and a trade union with control over the labor supply on the other. Hieser points out that the labor market functions differently than the commodity market for two reasons. First, there is a significant area within which a monopoly buyer of labor and the seller of labor have a common interest, "namely in extracting the largest divisible surplus from the consumer" (57). Secondly, labor cannot be held over as stocks nor is it possible for an employer who has a large fixed capital commitment to a particular place and time to liquidate his position readily.

The alternative school of thought considers a wage outcome as a balance struck by the relative bargaining powers of the two parties. Although the "bargaining power" thesis has common sense appeal, Hieser claims, "until we are offered an independent measure of bargaining power, the thesis is analytically meaningless" (58). Hieser also points out that maximization for a trade union is unlike maximization for a firm for two reasons. First, there may be a clash between maximizing wage rates and maximizing the wage bill. If the union is intent on maximizing the wage
bill then Hieser demonstrates analytically that the maximum wage bill a union might possibly extract from the employer is two-thirds of value added (price). Secondly, a trade union cannot pursue maximization by way of marginal adjustment. "When the chips are down, it will be the union's ability to sustain total withdrawal of labor which will set the limit on its bargaining power" (59).

Hieser claims the relative bargaining power of the two parties can be found in the "balancing of gains and losses by both sides in the stances of resistance or concession, respectively" (62). He then gives an explicit discussion of the main gains and losses of both participants in the bilateral monopoly wage bargain. As an example, he points out the incidental losses to an employer associated with a prolonged strike: first, failure to meet contract deadlines with customers may involve the firm in substantial damage; second, the strike may precipitate a liquidity crisis in the firm as revenues cease.

Johnston (1972) feels that the outcome in Hieser's analysis is obscure. In Johnston's opinion, Hieser's treatment of bilateral monopoly lacked three features: (1) it was not probabilistic, (2) it did not deal with the sequential nature of bargaining, and (3) it did not allow for bluffing and second-guessing. Johnston shows that there is, in general, a unique cost-minimizing pre-strike final offer and, if this fails, a unique cost-minimizing strike settle-
The levels of these offers and the connection between them are seen to depend on a few basic parameters of the relevant cost and probability functions" (851).

Johnston places emphasis on delineating those parameters which include: the employer's estimate of the real claim, the time span and the rate of time discounting, the current rate of profit per man, the employer's estimate of the strike parameter which expresses the union's propensity to endure a strike, and the supplementary cost parameter which includes subjective costs of a strike such as loss of good-will and future sales. Johnston also makes a sharp distinction between the pre- and post-strike stages, for the probability and cost considerations are radically different at each stage. For the employer, the optimal strike length is when the marginal strike costs are just offset by the marginal reduction in settlement cost. However, Johnston's model is asymmetric in that the employer minimizes costs by considering offers anywhere in a postulated range of values; the union, however, has to compare the gains currently available with the expected gain thought to be attainable in the future. Johnston's (1972) model of wage determination is primarily a theory of the employer's optimal response to the union claim.

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Kristensen (1976) takes issue with Johnston's assigned probability of the employer's revised offer space following a strike. He proposes basing the determination of expected value on one point, instead of an offer space (334).
Johnston and Timbrell (1973) test Johnston's model with aggregate United Kingdom annual data and found support for his model. Their basic hypothesis is that unions are essentially concerned with the growth of net real earnings. They claim that unions, "are growth conscious and conditioned to expect rising real standards" (84). Johnston and Timbrell conclude that their model provides a more adequate explanation of money wage movements than that offered by the conventional Phillips curve.

Spindler (1974) argues that certain standard cases of bilateral monopoly are determinate under the usual assumptions made in determinate theories of the firm. These assumptions are sufficient to determine an exogenous variable called "bargaining power" which plays an essential role in determining the outcome of bargaining. In Spindler's opinion, the equilibrium solution will involve an equalization of bargaining power and perceived profit. Thus the equilibrium agreement will involve physical and monetary gains that are similar when objective functions and information are similar for both parties. An interesting implication of Spindler's analysis is the notion that if either party has incomplete information, the bargaining process may serve as a means of producing and transmitting information. In the extreme, "if there is no information and no mechanism for obtaining it for any party, then the situation would be truly indeterminate" (472).
Phase III: Refinements on the Model

Stewart (1979) details a cause for confusion in the treatment of bilateral monopoly. He claims this confusion stems from the fact that the two simple treatments of bilateral monopoly differ about whether both price and quantity, or only price, can be effectively regulated by the negotiating parties.

Treatment 1 is based on the Edgeworth Box and has as its solution the set of points on the contract curve where no individual is worse off after the trade than before it. In this analysis, the monopolist and monopsonist act as if they could set both price and quantity in such a way as to extract all gains from trade for themselves, i.e., price discriminate perfectly.

Treatment 2 derives from Hicks' market-power model in which one agent attempts to act as a classical monopolist and the other as a classical monopsonist. The behavioral specifications of the market-power model is that each agent wishes to set only the price and force the other agent to pick the quantity to be transacted. Stewart concludes that the choice of the best treatment for a particular problem "depends on whether the analyst feels that both price and quantity or only price can be effectively regulated by the negotiating parties" (103). Stewart's conclusion readily applies to the theory of bilateral monopoly in the market for labor where parties typically bargain over wages and leave the level of employment open.
Weinstein (1981) employs a bilateral monopoly model to provide a theoretical explanation of the declining ratio of union to non-union wages during economic expansion, and to identify the bargaining ranges associated with changing labor demand and variations in the degree of union power. Weinstein extends the Marshall-Carter model of the union's wage preference path with a consideration of the nature of the feasible bargaining range and its relationship to the extent of union strength. Weinstein concludes, "the more imbalanced the relative power ratio, the smaller will be the size of the bargaining range. Also, the more imperfect the union's information concerning the firm's demand for labor function, the larger the bargaining range" (49). Weinstein also claims that a large rise in the MRP of labor may be required before the unionized firm will seek additional employment at the expense of rising wage because of the discontinuity in the firm's marginal resource cost function. The relevant points of his analysis are: (1) the marginal revenue from final output changes over the business cycle and may be unknown to the union, and (2) the inelasticity of the labor supply curve is directly related to the degree of union power.

Lazear (1983) takes as basic units of analysis the profit-maximizing firms in which workers are employed, and the individual utility-maximizing workers themselves. His goal is to provide a model which predicts in which industries, occupations and time periods unions are most likely
to evolve. Two of the implications of Lazear's model related to the bilateral monopoly model are: (1) that inelasticity of product demand increases the likelihood that an industry or occupation is unionized, but does not imply an increase in union power as measured by either an increase in union membership or the union/nonunion wage differential; and (2) the more elastic the supply of labor is to an industry or occupation, then the smaller the probability that the industry or occupation is unionized.

Riordan (1984) considers a bilateral monopoly with uncertainty and asymmetric information, and characterizes necessary and sufficient conditions for the existence of contracts that are efficient and incentive-compatible. The main implication of uncertainty is that efficiency considerations make it important to adapt trades to shifting market conditions. If uncertainty were the only critical feature of a market characterized by bilateral monopoly, then complete contingent contracts would allocate resources efficiently. Imperfect information, however, complicates contingent contracting. In Riordan's opinion, "if a contract conditions trades of information which is private to one or the other party, then the contract must also contain incentives for each party to always be truthful about the relevant private information" (83). The contracts can be implemented by a truthful sequential revelation game, or, alternatively, can be interpreted as specifying a class of payment schedules, designating one party to choose a
schedule from this class, and the other to pick a point on
the chosen schedule. Requirements contracts which establish
fixed payment schedules and grant the buyer discretion in
choosing quantity fit this description closely. Because
Riordan only considers "sequential contracts for which
truthfulness is an optimal Bayesian strategy for one party
and a dominant strategy for the other" (88), his analysis is
not readily applicable to a bilateral monopoly situation
involving collective bargaining in the labor market.

Dogas (1985) analyzes the effects of market and class
power as well as of unemployment on the industry money wage
in the context of the Hicksian bilateral monopoly model.
Dogas first looks at the degree of concentration within an
industry. Dogas believes the degree of concentration is
negatively related to the demand elasticity of the product.
Therefore, an increase in concentration may shift the capital-
ists' concession curve upward since the squeeze on in-
dustry profits following a given wage push will be smaller.
Secondly, Dogas considers the power of the whole capitalist
class as reflected in the aggregate degree of monopoly
throughout all industries. The net effect of overall
industrial monopoly "on money wages is ambiguous ... al-
though the net effect on the real wage is firmly negative,
due to positive influence on prices" (152). Thirdly, Dogas
considers union militancy and the level of unionization. He
believes both raise the cost of strikes to capitalists and
therefore lead to an upward pivot in the capitalist
concession curve. Also, an increase in unemployment is seen as raising the cost of a strike for workers. Dogas concludes that by affecting the strike cost for workers and capitalists, market and class power affect money wages independently of unemployment and, therefore, deserve a place in the wage equation.

Law (1986) adopts a variant of the Nash solution to bilateral monopoly and assumes fixed bargaining power between parties. Law examines the effects of regulation on input hire-prices in a model in which capital is purchased at a given market rate and the wage rate is determined through collective bargaining. Law demonstrates that if the firm is subjected to a binding regulatory constraint in the form of a maximum permitted rate of return on capital, his model does not imply that tighter regulation necessarily will induce an increase in the wage rate.\footnote{For example, "Under iso-elastic product demand, the wage rate falls as the maximum permitted rate of return is reduced, if the elasticity of factor substitution is less than unity" (Law 1986, 234).} In other words, Law finds that regulation may induce lower as well as higher wage rates.

Blair and Kaserman (1987) derive a contractual agreement that achieves results that are very close to vertical ownership integration in the bilateral monopoly situation involving two firms. The agreement between parties specifies a formula that determines the intermediate product price as a function of the final output price and the
average costs of production for both the intermediate and the final product. Under the Blair and Kaseerman's formula price contract: (1) each firm is led to pursue independent profit-maximizing policies that result in maximum joint profits; (2) the parties to the contract need only settle on mutually agreeable shares of the resulting maximized profit; and (3) the contract automatically will accommodate changes in production costs and final output demand. Formula price contracts are not applicable to bilateral monopoly in collective bargaining situations because they require negotiation on profit shares and some sort of post-negotiation audits of the production costs-events not possible for a union and a firm to undertake.

Blair, et al. (1989) extend the previous paper and maintain that the only "correct" solutions to bilateral monopoly "recognize that optimality requires joint profit maximization" (831). Blair et al. refer to Bowley's (1928) analysis to argue that there is a profit incentive for cooperation between firms under conditions of bilateral monopoly. If the cooperation comes about through the bargaining process, "the negotiation that takes place must involve quantity if joint profits are to be maximized" (835). Once again, this requirement eliminates their analysis for consideration in situations of bilateral monopoly.

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Blair, et al. (1989) claim that when authors use a labor union as the monopolist, it only tends to muddy the issue. This could be interpreted as a special case of bilateral monopoly where the seller could not guarantee quantity.
monopoly between a union and a firm because quantity of labor exchanged usually is not a subject of collective bargaining.

**Conclusion**

In sum, the literature review of 150 years of bilateral monopoly theory, especially as it applies to the labor market, provides a theoretical formulation from which to base an analysis of wage determination in the U.S. shipbuilding industry. The literature clearly divides into three distinct phases which are shown in a summary given in Appendix B. The predominate opinion of Phase 1 was Edgeworth's 1881 declaration that "contract without competition was indeterminate" (20). The first phase concluded in the early 1940s with a general agreement on the indeterminateness of the model. From the mid-1960s to the mid-1970s, the second phase includes several economic theorists who attempted to provide a determinate solution to the model. The key study of the second phase was de Menil's (1971) bargaining model in which he derives a testable wage equation from Nash's bargaining theory and empirically tests the model with industry-wide data. The third phase consists of several refinements of the model in the 1980s. This study is intended to be included in the third phase of the long-standing debate on bilateral monopoly theory.

When the entire 150-year literature review is taken into account, the consensus opinion is that the theory of bilateral monopoly is indeterminate as it applies to a labor
market where a monopolistic union faces a monopsonistic firm. In such cases where wages are determined by collective bargaining, market forces are primarily important in establishing boundaries on a range of indeterminateness, within which the levels of wages and employment can be expected to lie. The position of the final settlement within the range is determined by the balance of bargaining power employed by the parties during contract negotiations.

Bargaining Power Literature

Bargaining power is the proprietary ability to withhold products or production pending the negotiations for transfer of ownership of wealth (Commons 1934, 331).

Chamberlain's Theory

Chamberlain (1965) defines bargaining power as "the ability to secure another's agreement on one's own terms" (231). For example, management's willingness to agree to the union's terms depends on the cost of disagreeing with the terms (loss of profits during the strike) relative to the cost of agreeing (reduction in profits from paying higher wages). 9 Furthermore, management's willingness to agree on the union's terms represents the extent of union

9 Given the absence of perfect knowledge, each party's assessment of its own and its opponent's bargaining power must be based, at least implicitly, on some estimates of the relevant cost components. Each party's estimate of agreement costs will be influenced by the length of time for which it expects agreement, once reached, to last. Each bargainer's calculation of disagreement costs will be based on its expectations regarding both the disagreement costs per unit of time and the likely length of stoppage necessary to make its opponent accept on its own terms (Cartter 1959, 117-20).
bargaining power. In addition, Chamberlain maintains that bargaining power is not simply a reflection of one party's personal power to make the other party agree to its terms, "but a reflection of all the circumstances--economic, political, social, psychological--surrounding us" (231).

Determinants of Bargaining Power. For Chamberlain, the first primary determinant of bargaining power is the aspirations of the parties involved. The "costs" of agreeing to the other's terms involve intangible matters such as principles, prestige, and sentiment. "The costs are traced back to the negotiating objectives, goals and drives and the possible alternative ways to realize these aspirations" (233).

In Chamberlain's (1965) theory, the second determinant of bargaining power is "the relative values of alternative means to achieve aspirations" (235). In a long-term relationship, such as one in which a well-established union faces a successful company, the first alternative is the reasonable approach to each other with both parties trying to avoid unpleasantness. The other alternative results in more intense conflict. One party tries to force its will on the other and becomes more offensive if the other party has no genuine alternative. The dynamics of such a confrontational alternative are that, "the more detested the aggressor becomes, the less are the psychological or emotional costs of disagreeing with it" (Chamberlain 1965, 235).
The notion of manipulating personal relations has these days been given the sinister connotation of being Machiavellian. However, in labor negotiations, the parties each seek to manipulate the situation to their own advantage. Relative bargaining powers do not have to be taken as given. Collective wage bargaining is seen as the process in which each party adopts tactics designed to raise its opponent's ratio of the cost of disagreeing to the cost of agreeing to 1 or above, while simultaneously adopting tactics of a defensive nature that are designed to keep its ratio below 1. Chamberlain categorizes the manipulation in bargaining as attempts to achieve one of two goals.

**Goals of Bargaining.** First, a party tries to make disagreement on its terms more costly to the other. Union tactics in this category include strikes, picketing, support of other unions in strike funds and boycotts. Tactics discussed also include the adoption by bargainers of confident attitudes, which can be interpreted as attempts to convince the opponent of a propensity to hold out in order to achieve a demand and thereby to increase expected disagreement costs. Company tactics include threatening to close the plant, installing labor-saving machinery, mobilizing public opinion against the union, seeking a legal limit to picketing.

Secondly, a party tries to decrease the other's cost of agreement to its terms. Union tactics include a promise of cooperation, a stronger curb on wildcat strikes, and
increased control from the national union, over a local union leader causing trouble with management. At the same time, a bargainer may try to raise his opponent's attitude ratio further by trying to convince the opponent that he has overestimated the costs of agreeing with the current offer. The union may, for example, present arguments to the employer to suggest that he has overestimated the effect of its current demand on profits by failing to take full account of the improvements in productivity that will follow from the improved morale and living standards that will result from his conceding the claim, and so on. In addition, pre-negotiation build-ups of inventories by employers and financial reserves by unions can be interpreted as attempts by each to lower its own attitude ratios by decreasing respective disagreement costs.

Company tactics include promising to consult with the union over changes in the production process, talking to the union leadership quarterly about the company's financial position, and establishing a human relations committee. "Such devices may be treated by the other as 'concessions,' particularly for public relations purposes. As long as a party is not sacrificing aspirations it can increase its bargaining power by decreasing its other cost while avoiding real concessions" (Chamberlain 1965, 236).

Implications. The first implication of this theory of bargaining is that when all costs of a monetary and non-monetary nature are taken into account, the ratio of the
cost of disagreeing to that of agreeing must exceed unity for at least one party for agreement to take place. Otherwise, an impasse will result.

The second implication is that each party's bargaining power is not absolute; it depends on the relative level of demands. Relatively high demands at the bargaining table increase the other party's cost of agreeing and reduce your party's bargaining power.

The third implication of bargaining power is that bluffing may lead to commitment to positions which are in excess of what a party would settle for and foil a possible agreement. There may well be a zone of agreement, but where to settle depends on the ability to bluff about the willingness to strike. Management may seek to create an impression of strength, but may also blunder into an unwanted strike.

**Kuhn's Model**

Kuhn's model of bargaining makes a distinction between power and bargaining power. "Power is the ability to get the wanted goods from another party, and bargaining power is the ability to get them on good terms—that is, by giving up relatively little in return" (Herman, Kuhn and Seeber 1987, 238).

**Effective Preference.** In Kuhn's model of bargaining, the crucial concept, effective preference, is one's net desire for the good held by the other—and can be interpreted as a one-party equivalent of effective demand. Either party's bargaining power rises with an increase in
the other party's effective preference and decreases with an increase in one's own effective preference. "More formally, each party's bargaining power varies directly with the other party's effective preference and inversely with his own" (Herman, Kuhn and Seeber 1987, 241).

Tactics and Strategies. In Kuhn's bargaining model, tactics are defined as attempts to achieve the best possible settlement for oneself within a given set of effective preferences. On the other hand, strategies are defined as an attempt by a party to lengthen the opponent's effective preference while resisting any increase in one's own, or possibly shortening it. In Kuhn's framework, if the effective preferences change by different amounts, bargaining power shifts in favor of the party whose effective preference increases less.

Role of Strikes. In Kuhn's model, the only way the union can exert power, as contrasted to simple persuasion, is to be conspicuously unpleasant—to impose a penalty on the employer in the form of a strike. If there is no overlap of effective preferences, and if they stay that way, no transaction is possible, and the result is a strike. The purpose of a strike is to lengthen the employer's effective preference; hence, it constitutes a strategy (Herman, Kuhn and Seeber 1987). For Kuhn, it is not unionization, as such, that provides bargaining power to workers; it is the ability through collective action to cut off the flow of
labor to the employer--the ability to withhold that provides the power.

**Morgan's Perspective**

Morgan (1986) presents a view of organizations as political systems in which an understanding of what he terms "extramural" interests "provides us with a means of decoding the personal agendas underlying specific actions and activities" (151). Thus, reflecting a more humanistic approach, he states:

> We can begin to understand how people relate to their work through their own personal concerns, and detect the motivating factors that underpin the varied styles of careerism, gamesmanship, task commitment, rigidity, "turf protection," zealousness, detachment, and free wheeling that lend the politics of organizational life its detailed character (151).

According to Morgan (1986), a diversity of interests is evident in every organization, "and can be analyzed by tracing how ideas and actions of people collide or coincide" (153). Morgan argues that conflict arises whenever interests collide. Power is defined as "the medium through which conflict of interest are ultimately resolved," and for Morgan, "power influences who gets what, when and how" (158).

**Sources of Power.** Morgan (1986) identifies, among others, the following sources of power in organizations: formal authority, use of organizational structure, rules and regulations, symbolism and the management of meaning, the power one already has, control of scarce resources, decision
processes, knowledge and information, boundaries, technology, "informal organization" and counterorganizations. According to Morgan, these sources of power "provide organizational members with a variety of means for enhancing their interests and resolving or perpetuating organizational conflict" (159).

The first source of power identified by Morgan (1986) is formal authority. Morgan states that, "those who exercise bureaucratic authority must win the rights to power through procedural means, for example by demonstrating ownership or property rights in a corporation" (160). However, formal authority, "becomes effective only to the extent that it is legitimized from below" (160). Trade unions recognize this source of power, "channeling the power existing at lower levels of the pyramid to challenge the power at the top" (160).

Morgan (1986) points to the use of organizational structure, rules and regulations as a primary source of power in organizations. Morgan argues that organizational structure is frequently used as a political instrument to limit the role and influence of other key individuals.

Plans for organizational differentiation and integration, designs for centralization and decentralization, and the tensions that can arise in matrix organizations often entail hidden agendas related to the power, autonomy, or independence of departments and individuals (Morgan 1986, 163).

Morgan further claims that "rules and regulations are thus often created, invoked, and used in either proactive or
retrospective fashion as part of a power play" (165).

Another important source of power in organizations identified by Morgan (1986) is symbolism and the management of meaning. This source of power is related to one's ability to persuade others to enact realities that further the interests one wishes to pursue. Morgan points out,

In managing the meanings assigned to a situation, the leader in effect wields a form of symbolic power that exerts a decisive influence on how people perceive their realities and hence the way they act. Charismatic leaders seem to have a natural ability to shape meaning in this way (176).

Morgan focuses upon three related aspects of symbolic management: the use of imagery, the use of theater, and the use of gamesmanship.

Another important source of organizational power is identified by Morgan (1986) as control of knowledge and information. Morgan points out that many skillful organizational politicians control informational flows and knowledge that is made available to different people, "thereby influencing their perception of situations and hence the ways they act in relation to those situations" (167). In Morgan's view,

...Power accrues to the person who is able to structure the attention to issues in a way that in effect defines the reality of the decision making process. This draws attention to the key importance of knowledge and information as sources of power (167).

Morgan (1986) identifies control of counter-organizations as another route to power in organizations. By
joining, working for and rising up the ranks of a trade union, a worker has a way of balancing power relations in a company.\textsuperscript{10} The only way a blue-collar worker is going to discuss corporate issues with high ranking company executives on an equal basis is to be an elected union official.\textsuperscript{11}

Morgan (1986) also identifies control of "informal organization" as a source of power in organization. In his view,

Informal group leaders may become as powerful an influence on their group as any rule, regulation, or manager, and become forces to be recognized and respected for the way their area of the organization operates (174).

Morgan (1986) maintains that any discussion of power in organizations must give attention to "boundary management." The notion of boundary is used to refer to the interface between different elements of an organization. "By monitoring and controlling boundary transactions people are able to build up considerable power" (Morgan 1986, 169). Morgan further argues that, "One can also control transactions across boundaries by performing a buffering function that allows or even encourages certain transactions while blocking others" (169).

\textsuperscript{10} Pfeffer and Salancik (1978) claim that "the existence of strong unions provides [workers] with viable political power for expressing and realizing their desires for economic well-being independent of the organization for which they work" (9).

\textsuperscript{11} In a similar fashion, Walton and McKersie (1965) identify a subprocess of bargaining, intraorganizational bargaining, which refers to the internal negotiations taking place within each party.
Bacharach and Lawler

Bacharach and Lawler (1981) maintain that a bargaining theory should consider the context, but recognize that parties will attempt to change that context, either objectively or subjectively, in order to enhance their position in bargaining. Their basic premise is that "bargaining is a dynamic interplay between power and tactics; this implies the need for a theoretical framework that integrates bargaining context, process, and outcome" (40). According to Bacharach and Lawler (1981), "we must establish the relationship between bargaining power and tactical action and view bargaining power as a product of bargainers' specific actions and the bargaining context" (43).

Basic Assumptions. Bacharan and Lawler's (1981) image of bargaining generates three basic assumptions: (1) power is the essence of bargaining, (2) bargaining is a process of tactical action, and (3) bargaining power is subjective power. They claim that "bargaining power pervades all aspects of bargaining and is the key to an integrative analysis of context, process and outcome" (43). Bacharach and Lawler (1981) view power as the essence of bargaining:

The tactical approach to power implicitly accepts the distinction between potential and actual power, but discerns a third dimension—the use of power. This approach views potential power in terms of power and tactics and attempts to predict bargaining outcomes from tactical action. The focus is on the use and effectiveness of specific tactics, such as threats, bargaining toughness, and so forth (46).
For Bacharach and Lawler (1981), bargaining is a process of tactical action. They further claim that "tactical action is based on potential bargaining power and can be viewed as the intervening link between potential power and bargaining outcomes (47)." Their approach to bargaining power emphasizes tactics which "directly attack the opponent's definition of the power situation by manipulation information, bluffing and so forth" (50).

The third assumption of power makes the perception of power a crucial theoretical and empirical issue. In their view, "The cognitive approach to bargaining power is consistent with, and essential to, a conception of bargaining as impression management" (51). Bacharach and Lawler, argue that,

The task of the bargaining party is to convince its opponents that it controls resources, that the opponent needs the resources, and that it is willing to use power. These manipulative actions ultimately determine a party's bargaining power (51).

Dependence Approach. Given their emphasis on bargaining power as subjective power, Bacharach and Lawler (1981) adopt a dependence approach to power perception. Dependence refers to the degree that parties have a stake in the

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\footnote{This approach to tactical action is analogous to Walton and McKersie's (1965) subprocess of bargaining called attitudinal structuring which defines the quality and type of relationship between labor and management. Attitudinal structuring encompasses the efforts, intended and unintended, by the parties to shape their opponent's behavior. This subprocess describes the atmosphere prevailing at the bargaining table and the tactics that the parties can employ in order to change that atmosphere.}
bargaining relationship. "High stakes indicate that bargainers attribute considerable importance to maintaining the bargaining relationship" (59). However, the dependence relationship is not constant, "it is variable across and within settings and can be manipulated objectively or subjectively in the course of bargaining" (59). A theory of bargaining, therefore, must provide a framework that grasps the essential components or variables of the dependence relationship and also relates this ambiguous context to tactical action at the bargaining table.

**Dimensions of Dependence.** Bacharach and Lawler (1981) specify the dimensions of dependence as: (1) alternative outcome sources, and (2) the degree of commitment to the outcomes at issue. A party's bargaining power should be greater, the lower the opponent's alternatives and the higher the commitment of the opponent to the outcomes at issue in the relationship (61).

The first dimension of dependence, a party's alternatives, are determined by the availability of similar or substitutable outcomes from other relationships. A union and a corporation may be highly dependent on each other, but may differ significantly in their dependence regarding various bargaining issues. "A cognitive approach to bargaining power accentuates this potential difference, because subjective interpretations of the objective conditions regarding alternatives can vary much more than the objective conditions in any given context" (61). The second dimension
of dependence is commitment, which Bacharach and Lawler claim "captures the implications of the value dimension for bargaining relationships somewhat better than other terms" (62).

Facets of Power. Bacharach and Lawler (1981) maintain that the application of the dependence perspective to bargaining power suggests three facets of power: (1) absolute power is the power of an individual party irrespective of the other party's power, (2) total power is the sum of the parties' dependence on one another, and (3) relative power is the dependence of one party compared to the dependence of the other party13 (65). They also adopt a variable-sum approach to power which assumes that "total power in a relationship can change (due to environmental changes, tactical action, and so forth) and it is inappropriate to assume a priori a particular relationship between the power of each party"14 (p.68).

Bacharach and Lawler (1981) argue that, "the most general implication of a dependence perspective is that the dimensions of dependence (alternatives, commitment) are devices by which bargainers assess the nature of the power relationship" (68). In their opinion,

13 In a similar fashion, Walton and McKersie's (1965) first subprocess, distributive bargaining is a fixed-sum game in which the gain by one party is a direct loss to the opponent.

14 Walton and McKersie (1965) also categorize the variable-sum approach as the integrative bargaining subprocess where both sides search for solutions that would increase the size of the pie and the objectives of both parties need not necessarily be in conflict.
The dimensions of dependence can be construed as elements of the 'schemata of interpretation' employed by bargainers to make sense of the environmental, historical, and structural underpinnings of bargaining. The dimensions of dependence capture the process by which bargainers translate the bargaining context into an image of the power relationship and tactical action at the table (Bacharach and Lawler 1981, 68).

The two empirical questions critical to judging the credibility of a dependence theory are: (1) whether bargainers who have information on the dimensions of dependence use it to estimate each other's power, and (2) whether bargainers use the dimensions of dependence as criteria for making preliminary, broad tactical decisions.

**Leap and Grigsby**

Leap and Grigsby (1986), who expand on Bacharach and Lawler's theory, argue that potential power is transformed into enacted power because of: a party's strength of commitment to the relationship; the alternatives available to a party; and information available that has an impact on the bargaining relationship (205). The transformation power factors are viewed as converting potential collective bargaining power into that used by each party.

**Enacted Power.** Leap and Grigsby (1986) maintain that two factors define enacted power: (1) the respective parties are aware of the power they possess, and (2) the power is used in some manner to shape the final outcome of the particular bargaining relationship. Enacted collective bargaining power is of three types: total, absolute and relative. Furthermore, Leap and Grigsby maintain that
A theory of collective bargaining power must recognize that the controllability of resources and constraints affecting power vary and that bargaining power, whether defined in total, absolute, or relative terms, does not remain constant over time for either party. Rather, collective bargaining power fluctuates depending on the type and extent of controllable resources and constraints (206).

In their view, "the acquisition of bargaining power may be to a large extent, the acquisition of information pertaining to the resources and constraints of a particular bargaining situation" (208). Furthermore, an occasional piece of "inside" or "sensitive" information may create a power advantage for one party (208).

**Tactical Actions.** In Leap and Grigsby's (1986) model, both the amount and type of collective bargaining power will determine the tactical actions undertaken by the parties. The total actions, in turn, determine the collective bargaining outcomes. Their bargaining power model focuses strictly on the organized collective bargaining relationship and identifies the following set of tactics: settlement (either forced or congenial); strike or lockout; or the termination of the bargaining relationship (through the employer's replacement of striking workers or bankruptcy).\(^{15}\) The tactical actions set forth in their model are

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\(^{15}\) Their choice of tactics is consistent with the significant change in the early 1980s in the U.S. system of collective bargaining and industrial relations. "Certainly not since the days of the American plan and company unionism that followed World War I has it been socially or politically acceptable for U.S. management to embrace publicly a 'union free' preference as it is today. Clearly, the assumption that there is a legitimate conflict of interest in employment relations is not shared by a majority of American managers even though it is built into our public policies" (Kochan, Katz, and McKersie 1986, 9).
limited to the options normally exercised by either labor or
management that occur either when the deadline for settle-
ment has passed, or as a direct result of negotiations.

Reynolds on Strikes

Reynolds (1982) distinguishes between avoidable strikes
(ones in which the true positions of the parties overlap)
and unavoidable strikes (ones in which the final positions
fail to overlap). Reynolds notes several reasons why a
potentially avoidable strike may not be avoided. First,
inexperienced or clumsy negotiators may stake out firm
positions from which it is difficult to retreat, or may
misread the signals from the other side, and so on. Second,
even the tactics of experienced negotiators may misfire on
occasion. Third, there is a tactical difficulty of "coming
clean" about one's true position.

Reynolds (1982) also points out that unavoidable
strikes may also occur for several reasons. First, the
basic issue may not be the terms of the new contract, but
the framework of the bargaining itself. He claims that "the
size of the bargaining unit, the degree of cooperation among
employers and unions, and the timing of the contract expira-
tion date can influence the balance of power between par-
ties" (428). Second, one party may attach positive value to
the strike. For example, a union that never strikes may
lose its ability to make the strike threat credible and may
have to accept unfavorable settlements in consequence.
Third, a demand that must be granted in full or denied in
full, and is considered a matter of principle by one or both sides, can readily lead to impasse. Fourth, the negotiators are delegates of their respective organizations. They may be prevented from reaching a compromise by institutional constraints. Finally, a strike may result from misjudgment of the cost of disagreement. Even where compromise is possible, one party may have an incorrect opinion of the other's strength.

Conclusion

When the theories of collective bargaining are summarized and integrated, a logical scheme emerges in which the elements of the different theories can help to: (1) establish the background and basic framework for bargaining; (2) identify the factors that influence the position of the settlement along the range of indeterminacy in bilateral monopoly; (3) show how changes in the bargaining environment affect movement along the range; and, (4) identify the causes for strikes and assess their role in labor disputes.

Basic Framework

The dependency theory of Bacharach and Lawler (1981) readily applies to collective bargaining under situations of bilateral monopoly. Dependence refers to the degree to which parties have a stake in bargaining. Morgan's (1986) perspective indicates how formal bureaucratic authority and control over boundaries and counterorganizations can
establish the basic framework under which bargaining takes place.

Movement Along the Range of Indeterminacy

Chamberlain's (1965) theory of bargaining indicates that the parties will try to obtain an agreement on their terms (move along the range of indeterminacy in the appropriate direction) by either increasing the other party's cost of disagreeing, or by decreasing the other party's cost of agreeing.

Bargaining power is subjective and the outcome depends on tactical actions. Bacharach and Lawler (1981) maintain that a party's bargaining power increases as the opponent's dependence on the bargaining relationship increases. In addition, Morgan (1986) identifies the control of information and knowledge; and, informal organizations; and, the use of organizational structure, rules and regulations as sources of bargaining power which can effect the outcome of contract negotiations.

Changes in the Bargaining Environment

Kochan (1980) maintains that collective bargaining relationships are not static but exist in environments that constantly exert pressure on the parties to revise existing practices and conceptions about their appropriate roles. When changes in the bargaining environment affect the basic framework under which bargaining takes place, these changes can impact upon the final outcome of the settlement along
the range of indeterminacy.\footnote{Craft et al. (1985) argue that beyond the processes and resulting labor agreements, concession bargaining has had a significant negative impact on union solidarity, leadership, credibility and control, as well as union effectiveness and power. They claim, "Concession bargaining in the current economic context appears to have exacerbated intraunion differences, diversities, and conflicts by stimulating competition between union members" (170).} Following changes in the bargaining environment which occurred during the period before the previous contract expired, the parties' degree of dependence, total power and relative power may change as the parties enter a contract negotiation. When this occurs, the balance of bargaining power shifts, and hence the final outcome of collective bargaining. In addition, one party may be more aware of changes in the bargaining environment and, as a result, the parties may enter negotiations with different assessments of the facets of bargaining power.

**Strikes**

In Chamberlain's (1965) terms, the ratio of the cost of agreeing to disagreeing must exceed unity for at least one party in order for agreement to take place. Otherwise, a strike will occur. Strikes result when the final positions of the parties fail to overlap. Reynolds (1982) notes reasons why a potentially avoidable strike may not be avoided and he also points out several reasons why unavoidable strikes may occur. For example, the basic issue in negotiations may very well be the framework of bargaining itself.
Integrating Bilateral Monopoly and Bargaining Theories

The review of literature on bilateral monopoly theory as it applies to the labor market concludes that there is a range of indeterminateness within which the outcome of collective bargaining under conditions of bilateral monopoly can be expected to fall. Once the range of possible outcomes has been established, it is the relative bargaining power of each party that determines the outcome within the indeterminate range. The review of literature on collective bargaining power details several theoretical constructs that address the concept of bargaining power in collective bargaining situations. These theories provide different definitions of bargaining power, shed light on the sources of bargaining power, and elaborate on the tactical actions of either party which impact on the outcome of labor negotiations.
CHAPTER III
RESEARCH METHODOLOGY

Introduction
Evered and Louis (1981) identify and contrast two predominant approaches to, or paradigms of, organizational inquiry: (1) inquiry from the inside which is characterized by the experiential involvement of the researcher, and an intent to understand a particular situation; and (2) inquiry from the outside which calls for detachment on the part of the researcher who aims to uncover knowledge that can be generalized to many situations. In their opinion, an appreciation of such epistemological issues leads to the belief that, "the quality of a piece of research is more critically indicated by the appropriateness of the paradigm selected than by the mere technical correctness of the methods used" (386). Furthermore, they maintain that,

Our ability to grasp the breadth, depth and richness of organizational life is hampered by allegiance to a single mode of inquiry. Our efforts to develop comprehensive pictures of organizational phenomena are handicapped when only one mode of inquiry is sanctioned and practiced (Evered and Louis 1981, 393).

The research methodology of this dissertation is to explore the model of bilateral monopoly in the labor market in the shipbuilding industry with two different approaches: (1) a case study of a negotiated wage settlement, which
corresponds with research from the inside, and (2) an econometric model of wage-rate determination, which corresponds with research from the outside. By including both qualitative and quantitative methods of research, a clearer picture emerges of how well the bilateral monopoly model applies to the determination of wages in a specific industry. For example, the qualitative research indicates that in the case of one bilateral monopoly situation, the magnitude of wage increases in previous contracts affects union expectations in current negotiations. These findings are confirmed by the results of estimating an econometric model. The quantitative research indicates that both the labor market and the bargaining power explanatory variables were important to the determination of wages in situations of bilateral monopoly in a particular industry.

Quantitative Research Methodology

"It's not the figures themselves, she said finally, it's what you do with them that matters" (Kennedy 1979, xi).

The quantitative methodology used in this dissertation falls within the paradigm which views economics as a positive science. The ultimate goal of positive science, claims Friedman (1953), is development of a theory or hypothesis that yields valid and meaningful predictions about phenomena. Theories should be logically consistent and contain categories which have meaningful empirical counterparts. Given this, theories also must advance "substantive
hypotheses" which are capable of testing; further, "the only relevant test of the validity of a hypothesis is comparison of its predictions with experience" (Friedman 1953, 9). The validity of this empirical study lies in its ability to explain the determination of wages in one industry.

The quantitative methodology involves an empirical study of the factors which determine wages in one industry. The researcher's viewpoint on the contribution of empirical work agrees with Robins (1935) who emphasizes that empirical studies may be used for the short-term prediction of possible trends, but, they do not provide the grounds for discovering "empirical laws."

The proper use of 'realistic' empirical studies are: to check on the applicability of theoretical constructions to particular concrete situations, to suggest auxiliary postulates to be used with fundamental generalizations, and to bring to light areas where pure theory can be reformulated or extended (Robins 1935, 112-118).

In addition, "by 'trying out' pure theory on concrete situations, and referring back to pure theory residual difficulties, we may hope continually to improve and extend our analytical apparatus" (Robins 1935, 131). The purpose of this study is to improve and possibly refine the theory of bilateral monopoly as it applies to the market for labor.

**Econometric Model**

The quantitative method used in this study required the construction of an econometric model of wage-rate determination. Econometric models can be expressed in equation form relating variables quantitatively. The science of
model building, according to Pindyck and Rubinfeld (1981), consists of a set of tools, most of them quantitative, which are used to construct and then test mathematical representations of portions of the real world. The development and use of these tools are subsumed under the subject heading of econometrics:

Econometrics may be defined as the social science in which the tools of economic theory, mathematics, and statistical inference are applied to the analysis of economic phenomena (Goldberger 1964, 1).

The art of model building consists mostly of intuitive judgments that occur during the modeling process (Pindyck and Rubinfeld 1981, xii). The process of constructing the model used in this study was no exception, as intuitive judgments regarding the quantitative variables were required throughout the process.

The econometric model in this study was derived from the literature on wage-determination in unionized settings, and from data derived from case study interviews. The econometric model is intended to reduce the indeterminacy which is evident in the literature on bilateral monopoly. The model tests whether the negotiated changes in wages in the shipbuilding industry can be explained by the movement of economic variables over time. If the model explains a significant portion of the variation in the dependent variable, then, in this special case, the indeterminate range of the theory of bilateral monopoly is made more determinate.
The econometric model tests the extent to which local labor market conditions, consumer price changes, and the bargaining environment affect wage settlements. This is accomplished by analyzing the contribution of individual variables included in the regression model. When the labor market variables dominate is an indication that the negotiating parties were acting as if they possessed "perfect knowledge" of the economic factors which help to determine the supply and demand curves for labor. Because it is impossible to identify a single variable which serves as a measure of bargaining power, several variables are included which capture the effects of the bargaining environment in which wage negotiations take place. If the bargaining environment variables contribute significantly to the explanatory power of the model, it supports the proposition that bargaining power establishes the wage within the indeterminate range. This would indicate that the institutional and structural framework for negotiating is crucial to understanding wage settlements under conditions of bilateral monopoly.

What distinguishes an econometrician, says Kennedy (1979), is "preoccupation with problems caused by violations of statisticians' standard assumptions; due to the nature of economic relationships and the lack of controlled experimentation, these assumptions are seldom met" (1). Furthermore, "It remains a fact, though, that in practice good results depend as much on the input of sound and imaginative
economic theory as on the application of correct statistical methods" (Kennedy 1979, 2). The skill of the econometrician, according to Kennedy, lies in judiciously mixing these two essential ingredients. When constructing the model for this study, the researcher attempted to ground all explanatory variables in sound economic theory, while at the same time, following Occam's razor, the econometric model remained as simple as possible (Gujarati 1978, 27).

The econometric model specifies a functional relationship between the explanatory factors and the negotiated wage rates. A functional relationship must also include a disturbance or error term, which changes the relationship from a deterministic one to a stochastic one. The disturbance term is used to capture explicitly the size of the error from the precise value of the variable being explained. The existence of the disturbance term is justified in three main ways which are not mutually exclusive: (1) omission of the influence of innumerable chance events, (2) measurement error because of data collection difficulties or because a proxy variable must be used, or (3) human indeterminacy or inherent randomness in human behavior (Kennedy 1979).

Associated with any explanatory relationship are unknown constants, called parameters, which tie the relevant variables into an equation. Data are used to estimate the parameters of the equation, and theoretical relationships are tested statistically. The existence of the disturbance
term, coupled with the fact that its magnitude is unknown, requires that parameter values be estimated.

Estimating parameter values depends in large part on the nature of the disturbance term; statistical assumptions concerning the characteristics of the disturbance term, and the means of testing these assumptions, therefore, play a prominent role in econometric theory (Kennedy 1979, 4).

In order to obtain a sufficient number of observations in the data set, it was necessary to pool the data from the time period 1968-87 across a cross-section of thirteen firms. However, the necessity of combining time-series and cross-section variables in the model adds a new dimension of difficulty to the problem of model specification. This problem, in turn, suggests that the structure of the disturbance term may be a complex one, since the disturbance term is assumed to result in part from the effects of omitted explanatory variables. The difficulty arises because the disturbance term is likely to consist of time-series related disturbances, cross-section disturbances, and a combination of both (Pindyck and Rubinfeld 1981).

One scheme by which data may be pooled successfully involves the recognition that omitted variables may lead to changing cross-section and time-series intercepts. The econometric model in this study, therefore, uses covariance analysis which adds dummy variables to the model to allow for these changing intercepts.

The basic format or guideline for writing the report of the findings of this empirical study are found in Ramanathan
(1989) and in Intrigilator (1978). The aim of the researcher was to include all aspects of the empirical study within the chapter, including the relevant professional literature, formulation of the model, issues with data, and presentation and interpretation of the findings.

Qualitative Research Methodology and Experience

Field work is one answer---some say the best---to the question of how the understanding of others, close or distant, is achieved (Van Maanen 1988, 2).

The goal of the case study is to develop a comprehensive overview of the factors that contributed to the occurrence and eventual settlement of the labor dispute in the summer of 1985 between a major defense contractor and builder of warships, Bath Iron Works, (BIW), Bath, Maine, and Local 6 of the Industrial Union of Marine and Shipbuilding Workers of America, (IUMSWA). The case study focuses on determining which factors contribute to the enhancement or diminution of bargaining power--itself a central feature of the econometric model--throughout the collective bargaining process. In the shipbuilding industry as in most industries, collective bargaining is a complex, dynamic and lengthy process involving much uncertainty regarding the many factors that may have an impact on negotiations. In short, the case study defines which party held the balance of bargaining power in 1985, and determines how it was acquired.
The BIW case study examines: (1) what the negotiating goals of each party were, and what factors influenced the formulation of negotiating goals; (2) if the various bargaining tactics and strategies were important in determining the eventual settlement; (3) if the effects of outside forces on the negotiations were influential in arriving at a settlement; (4) what factors helped to set the boundaries on the possible range of outcomes of the contract negotiations; and (5) how the negotiation between a union and a firm at one geographic location helps to explain bilateral monopoly theory in the market for labor.

The shipbuilding industry is especially appropriate as an example of a real-world bilateral monopoly situation because it is highly unionized with well established, long-standing unions that face shipbuilding firms which have made substantial capital investments and cannot easily move. Furthermore, in the geographic area surrounding most large shipyards, the union has considerable monopoly power over the supply of skilled shipyard labor and the firm has considerable monopsony power over the demand for such labor. The 1985 BIW labor negotiation is an excellent case to study in the context of integrating bilateral monopoly and collective bargaining theories because BIW readily fits the bilateral monopoly model, and because many of the factors which affect collective bargaining settlements in the industry were present in the 1985 dispute. In fact, the federal mediator indicated that BIW was a classic textbook case of
contract bargaining in which several examples of successful and unsuccessful bargaining were present (McGonagle 1988). A detailed account of the literature and the researcher's experiences producing the ethnographic case study is given in Appendix D.

**Blending Quantitative and Qualitative Analysis**

The dual methodology of this dissertation involves the examination from two different approaches of how bargaining power impacts on the determination of unionized wages. The analogy often used to describe this methodology is the fixing of a point in the distance by triangulation—the two methods are both fixed on the same objective. The aim of the dissertation is to combine inquiry from the outside (econometric model) with inquiry from the inside (ethnographic case study) in order to produce a clearer picture of how the bilateral monopoly model applies to the determination of wages in a specific industry. In addition, in the process of constructing and estimating the model and producing the ethnographic case study, some measure of merging of the two methods took place.

From a practical standpoint, the data from the case study proved to be valuable when making phone calls to unions and firms requesting data. It is much easier to relate to a total stranger over the phone if one can allude to a particular person or issue related to an important labor negotiation. In addition, the quantitative data from
the model allowed the researcher a measure of expertise in the industry that proved valuable during the interview process. For example, it was easier to talk about the BIW benefits package once the researcher was aware of contract language on benefits at other shipyards. Detailed knowledge of the industry made it easier to convey an image of an informed observer, while at the same time provided background information necessary to understand the discussions of issues related to labor-management relations. The econometric model is intended to examine the various factors which influence the determination of wages in the U.S. shipbuilding industry. The case study is intended to extrapolate, from a single historical case of labor negotiations, variables to be included in the econometric model. For example, interviews conducted with both management and the union indicated that the magnitude of past wage settlements had an impact on bargaining. As a result of this information, the model includes as an explanatory variable, the average annual wage increase during the life of the previous contract. The case study also reveals factors impacting on the determination of wages which cannot easily, and may never, be reduced to measurable quantities. For example, dissention among competing factions on the respective bargaining teams impacted on the negotiations, but this factor is not easily quantified. These factors provide valuable insights, points of reference, and help explain the range of indeterminacy in the theory of bilateral monopoly.
The case study is, therefore, both a complement to the regression model, and a means of examining the richness and complexity of organizational life. The two research methods are intended to complement each other in a reciprocal manner. The case study provides insights into the regression model by providing new variables and explaining indeterminacy, while the model informs the perceptual framework of the case study by providing the field upon which to focus observations. At the same time, both methods contribute to the goal of examining how bargaining power impacts on unionized wage negotiations in one industry.

In this study, both quantitative methodology (econometric model) and qualitative methodology (ethnographic case study) are used to produce a clearer picture of how well the bilateral monopoly model explains the determination of wages in the U.S. shipbuilding industry. The literature review on bilateral monopoly in the market for labor indicates a range of indeterminacy within which the settlement is expected to lie. Relative bargaining power between the parties in contract negotiations determines where the settlement will fall along the range of indeterminacy. The bargaining power literature reveals that different perspectives on power in collective bargaining can help to explain the factors that impact on labor contract negotiations.

The aim of the econometric model of wage-rate determination is to identify the significant factors which impact on contract settlements under conditions of bilateral
monopoly in large private shipyards. The econometric model also raises a number of issues which need to be addressed by a case study of the 1985 labor dispute and settlement at BIW.\footnote{Allison (1971) claims that, "by assuming an economic definition of the situation, economists impose a bench-mark that stipulates the content of the 'values,' 'alternatives,' and 'consequences' in the rigorous model. This leads many economists to overlook a wide range of values and consequences that are important to students of political, psychological, and sociological behavior" (32).} The aim of the ethnographic case study is to examine those factors which contributed to the enhancement or diminution of each party's bargaining power in a specific labor negotiation. In bilateral monopoly situations, the party which is able to establish and use its bargaining power effectively will move the settlement toward its desired wage along the range of indeterminacy. Therefore, the issue of bargaining power is crucial to understanding the determination of wages under conditions of bilateral monopoly.
CHAPTER IV

EMPIRICAL ANALYSIS OF WAGE-RATE DETERMINATION
IN THE U.S. SHIPBUILDING INDUSTRY

Introduction

It is well-known that not much progress has been made in assimilating microeconomic analysis of bargaining models of aggregate wage inflation (Farber 1978, 262).

The purpose of the econometric model developed in this section is to complete the linkage between the case study of wage determination at Bath Iron Works and the theory of bilateral monopoly in the market for labor. The econometric model tests whether the negotiated changes in wages collectively bargained in the shipbuilding industry under conditions of bilateral monopoly can be explained by the movement of economic variables over time. The model estimated in this thesis is unique in that no previous study has empirically analyzed the outcomes of collective bargaining using the bilateral monopoly framework in a single industry using microeconomic data. The regression model of the change in the wage rate quantifies the wage settlements of individual union contracts in shipbuilding and relates these to: (1) the local labor market conditions, (2) consumer prices, and (3) the bargaining environment that prevailed during the term of the previous contract and during the bargaining period.
The regression model of the percent change in the negotiated wage rate is:

\[ \hat{\lambda}_t = a_0 + a_1 1/U + a_2 \hat{\lambda}^t + a_3 \hat{\lambda}^f + a_4 \hat{P}_{t-1} + a_5 \hat{W}_{t-1} + a_6 N_{A_{t-1}} + a_7 U_{N} + a_8 G + a_9 AVEW_{t-1} + a_{10} S_{1} + \ldots + a_{21} S_{12} + e_t \]

Where:

- \( \hat{\lambda} \) = percent change in the negotiated wage rate
- \( 1/U \) = inverse of the state unemployment rate
- \( \hat{\lambda}^t \) = percent change in the state manufacturing wage
- \( \hat{\lambda}^f \) = percent change in nearby federal shipyard wages
- \( \hat{P}_{t-1} \) = regional consumer price index lagged one year
- \( \hat{W}_{t-1} \) = average of wages in other shipyards
- \( N_{A_{t-1}} \) = Navy shipbuilding expenditures
- \( U_{N} \) = percentage of labor force unionized in the state
- \( G \) = 1 - for periods of wage controls
- \( 0 \) - otherwise
- \( AVEW_{t-1} \) = average percentage change in wages during the life of the previous contract
- \( S_{1} \) = 1 - for shipyard no. 1
- \( 0 \) - otherwise
- \( \ldots \)
- \( S_{12} \) = 1 - for shipyard no. 12 (N-1 number of firms)
- \( 0 \) - otherwise
- \( e_t \) = error term

The classical normal linear regression assumptions are assumed to hold: that is, each \( e_t \) is identically and independently distributed, \( N(0, \sigma^2) \).
Formulation of the Regression Model

The regression model is in part a response to de Menil's (1971) call for further studies of wage determination under bilateral monopoly estimated with microeconomic data. In that it builds on the results of previous studies of wage rate determination, the model is somewhat of a hybrid. The model incorporates variables based on those employed by Hamermesh (1970), de Menil (1971), Marcus and Reed (1974), Farber (1978), Izraeli and Kellman (1979) and Beaumont (1983). Variables also were included as a result of qualitative data obtained from case study interviews and from background research on the industry.

Dependent Variable

The dependent variable, \( \dot{w} \), is the percent change in the negotiated wage rate collectively bargained between a monopolistic union and a monopsonistic firm in individual shipyards for the 1968-1987 time period. Hamermesh (1970) emphasizes the need for studies based on wage contracts instead of using periodic observations of earnings data. Hamermesh points out that earnings vary as a result of changes in productivity, skill mix, and the percentage of workers whose contracts were negotiated in a particular year. Therefore, the regression model in this study analyzes changes in wage rates in the U.S. shipbuilding industry in instances where one firm collectively bargains with one union in a single geographic location. Such situations, where the union and the firm are in a long-term bargaining
relationship, are consistent with the definition of bilateral monopoly in the market for labor if the firm is a monopsony in the relevant labor market.

**Variables Related to the Local Labor Market**

The theory of bilateral monopoly, based on the assumption of rational maximizing behavior, is unable to yield a unique prediction of the wage settlement. However, the theory delineates a range of indeterminacy within which the outcome is expected to lie. The bounds on the range of indeterminacy are set by the position and slope of the labor demand and labor supply curves. Since these curves are determined to a large degree by market forces, the local labor market is of primary importance in establishing the boundaries within which the wage settlement will fall. In terms of the graph of bilateral monopoly given in Figure 1, the labor market variables help to establish the position and the slope of both the $D_L$ and $S_L$ curves. These curves, in combination with their associated $MRP_L$ and $MFC_L$ curves, determine the range of indeterminacy, $U-C$, for the wage rate and, $S-R$, for the quantity of labor hired.

![Bilateral Monopoly](image-url)
The regression model, therefore, accounts for the influence of the local labor market on shipyard wage increases by employing explanatory variables which measure the local unemployment rate\(^1\) and wages in alternative employment in manufacturing and in federal shipyards. If the labor market variables are found to be significant, it indicates that conditions in the local labor market help to establish the boundaries on the range on indeterminacy.

**Unemployment.** The first labor market variable, \(1/U\), the inverse of the statewide rate of unemployment, captures the effect of slack or tightness in the local labor market on increases in shipbuilders' wages. The statewide unemployment rate reflects the opportunities for employment outside the firm and affects the position and slope of the \(S_L\) curve in Figure 1.

The wage adjustment hypothesis for labor markets proposed by Phillips (1958) and Lipsey (1960) is that there is a stable inverse and non-linear relationship between the annual proportional rate of change of money wages and the unemployment rate. Including the inverse of the state unemployment rate accounts for the Phillips' hypothesis for local labor markets and wages in one industry. As unemployment increases, union wage demands tend to decrease, because the slack in the job market reduces the chances for

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\(^1\) Behman (1968) and de Menil (1971) utilize various measures of a turnover rate to account for labor demand pressure.
employment outside the firm.\textsuperscript{2} The expected sign on the coefficient of the inverse of the unemployment rate is positive.

**Alternative Wages.** The labor market variables, $\dot{W}$ and $\dot{\bar{W}}$, measure wage changes in alternative forms of employment, and they capture the effect of shipyard workers' potential for earnings in manufacturing industries within the state, $\dot{W}$, or in nearby federal shipyards, $\dot{\bar{W}}$. Wages in alternative forms of employment affect the position and slope of the $S_L$ curve in Figure 1. The alternative employment variables are included in the model partly as a result of background research conducted for the case study. The researcher's earlier labor market study of the geographic area which comprised the commuting area to the firm indicated that shipyard wages might be affected by wages in statewide manufacturing and by wages in other competing shipyards. One potential source of difficulty with the variable $\dot{\bar{W}}$ is that four of the 13 private shipyards are not located close to a federal shipyard. In fact, there are no federal shipyards on either the Great Lakes or the Gulf Coast. In these cases, wage data from the federal shipyard located closest to the private shipyard was utilized. This variable also could present problems because federal shipyard wages

\textsuperscript{2} Higher rates of unemployment also may cause union negotiators to modify their demands because of fears of loss of union security and unwillingness of the workers to support an extended strike. High rates of statewide unemployment would, therefore, tend to influence the contract settlement downward toward the company wage, $OC$, along the range of indeterminacy.
are established by the Federal Wage Fixing Authority and are based on manufacturing wages in the area. If shipyard workers constitute a large proportion of manufacturing workers in the area, then inclusion of this variable may introduce a degree of simultaneity. Lastly, wages are not the only factor to consider when comparing the compensation packages of federal shipyards to those in private industry. The level and structure of fringe benefits and the issue of job security present additional problems with using this variable to capture the effect of wages in alternative shipyard employment.

Large wage increases in both types of alternative employment would tend to shift the labor supply curve to the left, thereby resulting in a shift upward of the range of indeterminacy. This shift is depicted in Figure 2. The expected sign on the coefficients of the variables measuring wages in alternative employment is positive, because private shipyard wages should match wage movements in alternative forms of employment in the local job market or in federal shipyards.
Consumer Prices Variable

Labor supply is a function of the real wage, so union negotiators are concerned with at least protecting their members' standard of living against the effect of consumer price inflation. Johnson and Trimbell (1973) hypothesize that unions are conditioned to expect rising real standards. The regression model, therefore, includes the lagged regional rate of inflation, \( \dot{P}_{t-1} \), to capture the influence on wage rates of changes in consumer prices. If the consumer price inflation variable is significant, it indicates that awareness of past increases in the cost of living influences the unions' demands. The hypothesized sign of the coefficient on the consumer price variable is positive. The model's use of firm data on negotiated wage rates as the dependent variable has the advantage that cost-of-living changes can be considered as exogenous determinants of wage changes because wage increases in a shipbuilding firm do not have a significant impact on regional increases in the cost of living. This eliminates the concern over simultaneous equations bias in the estimates. The consumer price inflation variable controls for price increases so that we can observe the real effect of explanatory variables.

Studies such as Israeli and Kellman (1979) found that a lagged price inflation term tended to better explain wage inflation than did current price inflation. This is consistent with a simple catching up hypothesis or an adaptive
expectations mechanism. The model in this study, therefore, lags the consumer price inflation variable one year.\textsuperscript{3}

**Variables Related to Bargaining Power**

Although it is generally accepted that the conditions of supply and demand exert some independent influence on wages, what is more difficult to establish is exactly how much union bargaining power is able to influence wages independent of local market conditions.\textsuperscript{4} The range of indeterminacy in the theory of bilateral monopoly indicates that it is theoretically possible to capture anything between zero and one-hundred percent of the company's monopoly surplus. In terms of the graph of bilateral monopoly given in Figure 1, the settlement may fall anywhere between the company wage rate, OC, and the union wage rate, OU. Bargaining power determines where the settlement will fall along the range of indeterminacy.

De Menil (1971) derives a model of wage determination under bilateral monopoly which is based on Nash's formal

\textsuperscript{3} A variation on the inflation variable was introduced by Hamermesh (1970) who introduced dummy variables to capture what he termed the "threshold effect". Hamermesh's study based on microeconomic data from unionized firms in 15 industries, finds that "there is some threshold rate of inflation [2\%] that awakens workers to the erosion of their living standards" (504). His variation was not used in this study because an inflation threshold would have varied greatly in the 1968-87 time period.

\textsuperscript{4} For Dunlop (1950) "pure" bargaining power (the ability to get favorable bargains apart from market conditions) consists of: (a) the extent of knowledge of tastes and market conditions influencing the behavior of the other party, and (b) intrinsic "toughness," the ability to get the desired result with a given amount of energy and unpleasantness (77).
theory of bargaining. Nash's theory predicts that the outcome of a bargaining process will occur where the product of the bargainers' utility increments is maximized. De Menil assumes that the union's utility is a function of that part of the wage bill which is union-induced since the union must maintain a differential between union and non-union wages and, therefore, he includes non-union wages as an explanatory variable. He tests his model with microeconomic data from highly unionized industries in the manufacturing sector. The results of his study indicate that three bargaining variables add to the explanatory power of the model: (1) non-union wages, (2) wage levels in the previous time period, and (3) the net value of productivity per worker.

Several researchers have done empirical studies which attempt to model the influence of union bargaining power by utilizing various measures of union "pushfulness." Hines (1964) uses the rate of change of the percentage of the labor force that is unionized, and Godfrey and Taylor (1973) use the level of strike activity. This approach has been strongly criticized by Purdy and Zis, (1974) who claim that, "although we may be able to make inferences from observations of power, all that we ever observe is exerted influence" (43). They also make the conceptual distinction

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5 To proxy non-union wages, de Menil (1971) uses the average going wage in the low-wage, predominantly non-unionized sectors of the private economy, that is, wholesale and retail trade, services, and government enterprises.
between militant behavior and union influence that sees militancy as only one means by which influence is exercised.

Wilkinson and Burkitt (1973) set aside the question of labor market versus bargaining power and conclude that it is more important to know how union policies are formulated and put into effect. In their opinion, "the specification and measurement of power are multidimensional problems which may prove tractable to factor analysis" (121). They advocate testing if it is possible to delineate the "economic, financial, demographic and political components of union power" (121).

Armstrong, Bowers and Burkitt (1977) estimate the correlation coefficient between the rate of change of unionization and an index of strike activity in fourteen industries and claim that a single explanatory variable is "inadequate to reflect the many dimensions of union power" (98). They conclude that a more detailed theoretical analysis of the sources, weapons and objects of union power is required.

According to Farber (1978), the rate of concession of the union is a function of: (1) the ability of members to replace income lost during a strike from either union strike benefits or alternative employment, and (2) militancy of the rank-and-file. His model of the rate of union concessions (tested with microeconomic data) includes the following variables: (1) union fund balances per member, (2) labor's share of the firm's total sales, and (3) the average annual
rate of change of real wages over the life of the previous contract.

Although it is possible to identify sources of power and whether the means to implement power are present, "bargaining power" itself cannot be observed. It is also not feasible to identify a single variable to capture the influence of bargaining power on wage rates. Therefore, the regression model in this study views a union's ability to influence wages to be a function of the bargaining environment in which negotiations take place. Several independent variables were chosen to indicate the overall bargaining environment. The choice of bargaining environment variables resulted from integrating previous empirical studies with data from case study interviews of both management and union negotiators.

**Wage Transmission.** Case study interviews revealed that union and company negotiators are intensely aware of settlements in competing firms. Regional wage rate studies have indicated that the wage rate in a particular region may be sensitive to wage rates in surrounding and competing regions. Marcus and Reed (1974) found a wage transmission variable to be significant in a study of the determinants of wages in sub-regional labor markets. Beaumont (1983) concluded that the local labor market has inconclusive effects on the wage process in the manufacturing sector, but that a transmission variable weighted for distance and size of the manufacturing sector was significant. Flanagan (1976)
argues that many "wage patterns" would be expected in an economy without unions, and that "some institutional developments may simply codify practices and outcomes that would have been observed even in their absence" (667). He maintains that centralized bargaining structures are almost nonexistent in oligopolistic sectors of the economy. ⁶ Each of the collective bargaining situations studied by Flanagan (1976) yields settlements that are characteristic of the pattern followed within that industry (669).

Using these previous studies as a basis, the regression model includes a transmission variable which captures the influence of intra-industry feedback on wage settlements. The wage transmission variable for each shipyard, $\bar{W}_{t-1}$, is defined as the ratio of the wage rate in that shipyard to the average of the wage rates in the other shipyards, all lagged one time period. If wages in the ith shipyard are lower than in other shipyards, wage increases will be raised to keep in line with industry norms. Therefore, the expected sign on the coefficient of the transmission variable is negative.

**Navy Expenditures.** The second bargaining variable, $NA_{t-1}$, captures the effect of a change in the magnitude of the total of Navy new construction and repair contracts as a

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⁶ For example, in 1973 less than 3 percent of the unionized workers in transportation equipment [includes shipbuilding] are covered by multi-employer agreements. According to Flanagan (1976), "This pattern reflects the costliness of enforcing a multi-employer bargain to prevent chiseling; and centralized negotiating arrangements tend to endure where the economic circumstances of the firms are similar" (668).
percentage of the level of defense expenditures on goods and services in the year prior to the negotiation. An important negotiating factor, according to the local union president, is the backlog of work the shipyard has contracted with the Navy. Therefore, the union requested the Navy's five-year buying plan before the start of negotiations (Ladd 1989). In order to insure against the possibility that this variable is incorrectly specified, other versions of $NA_{t-1}$ are explored. The alternate versions of this variable are Navy expenditures as a percentage of the size of the economy, and as a percentage of federal expenditures. High values for this ratio indicate periods of high industry revenues and wage settlements that may not be severely contested. Therefore, the expected sign on the coefficient of the Navy contracts variable, $NA_{t-1}$, is positive. The relative level of Navy expenditures also is an indirect determinant of the $D_t$ curve, and therefore, affects its position in Figure 1.

Unionization. The next bargaining environment variable, the statewide rate of unionization, $UN$, reflects the impact of worker solidarity on the bargaining process. A higher percentage of unionization in a state also lowers the possibility of substitution of non-union labor for union labor. Rosen (1969) tested union power in fifty-nine industries and found that increased organizational strength increases union wage power by lowering the elasticity of demand for union labor through reduced product substitution between union and non-union sectors of the industry. In a
similar study, Freeman and Medoff (1981) also found that, "the percentage [of an industry] organized is an important determinant of union power" (571). The unionization variable in this study is an indicator of union strike potential within a state because of the potential moral and financial support from other unions. Therefore, the hypothesized sign on the coefficient of the variable measuring the unionization rate is positive.

**Wage Controls.** The dummy variable, G, takes the value of 1 if a contract was settled during the period of wage and price controls in the early 1970s. Wage controls, which represent a legal barrier against wage increases, were imposed during the following periods: August, 1971 - December, 1972 and June, 1973 - December, 1973 (Congressional Budget Office 1977). Both de Menil (1971) and Farber (1978) find wage and price guidelines in the 1960s to be significant in their models of wage rate determination. In order to test for the effect of incomes policies under Nixon, Flanagan (1976) uses a dummy variable which takes the value of unity for contracts settled in 1972 and 1973. When wage guidelines are in effect, outside pressure is brought to bear on the union to concede and it will tend to influence the settlement toward the company wage, C, along the indeterminate range in the model of bilateral monopoly. Since the presence of wage controls will decrease the size of union wage demands, the expected sign on the wage control dummy variable is negative.
Past Settlements. Case study interviews conducted with both management and the union indicated that the magnitude of past wage settlements had an impact on bargaining. In each firm, large wage increases in the previous contract period put upward pressure on wages because of union expectations of continued generous contracts. As a result of this information, the model includes the bargaining environment variable $\text{AVEW}_{t-1}$, the average annual wage increase during the life of the previous contract. De Menil (1971) utilizes lagged values of wage rates as a measure of the dynamic adjustment of wages. Farber (1978) utilizes the average annual rate of change of real wages over the life of the previous contract as a measure of union militancy. The implications of their findings, verified by the BIW case study, are that when a union has been accustomed to substantial wage increases, the company's attempt to reverse the trend will be met with severe union resistance.

Demand for Labor. Two additional bargaining environment variables which would serve as proxies for the position and elasticity of demand for labor were considered for inclusion in the model. Clark and Freeman (1980) find that under a variety of specifications, the elasticity of demand for labor is more elastic than previously thought. Freeman and Medoff (1982) present evidence which suggests that the ease of substituting for production labor, particularly substituting non-production for production labor, is lower in union than non-union settings in U.S. manufacturing and
reflects the fact that unions tend to locate and survive where constant output demand elasticity for production workers is inelastic (232). If the demand for labor is relatively inelastic, the union will be more inclined to push for a wage increase since it will result in a relatively small decrease in employment. The demand for labor is a derived demand and will be more inelastic under two conditions: (1) with inelastic demand for the product, and (2) if labor costs are a small portion of total costs.

The first of the variables considered, the percentage of revenue from repair contracts, is a proxy for the price-elasticity of demand for the firm's product. Demand for repairs will be more price elastic because the Navy can more easily delay the overhaul of existing ships. In addition, since the market for repair work is more competitive, management will have a greater incentive to keep wages lower. The other elasticity variable, labor costs as a percentage of total costs, represents the input factor share attributed to labor in the production process at the ith shipyard. When labor constitutes a relatively large portion of the production costs, a wage increase will have a greater impact on total unit costs. Therefore, the demand for labor will be more elastic if labor costs constitute a larger portion of total costs. The hypothesized sign on the coefficients of both elasticity variables is negative because the union will be less inclined to push for a large wage increase when the demand for labor is more elastic.
However, microeconomic data for these firm specific variables simply was not attainable. The shipbuilding industry is under intense competitive pressure and shipbuilding firms are unwilling to release this sensitive information to the public or to academic researchers. As part of the agreement to release information to government agencies, shipyards request that individual firms cannot be identified. Therefore, these firm specific variables were reluctantly dropped from the model.

Case study interviews conducted with union officials revealed that they believed that the short-run need for production workers was an important component of bargaining power. They felt that a crucial factor in establishing "leverage" at the table is the timing of negotiations in relation to the production phase of ongoing contracts. The firm-specific data on the short-run demand for production workers is not information that shipyards are either willing or able to release. Although this variable is a potential determinant of bargaining power, because of the data limitations, it is not possible to include it in the regression model.

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7 In addition to the individual firms, the following sources were contacted in an unsuccessful attempt to locate the shipyard cost data: U.S. Census Bureau, Department of Transportation - Maritime Administration, Federal Procurement Data Center, Department of Defense - Pentagon Research Library and Navy Sea Systems Command, AFL-CIO Maritime Committee, DMS Market Intelligence Report, and Shipbuilders Council of America.
Variations on the Model

Variations on the basic model are estimated in order to: (1) test the possibility that a union's ability to increase wages is different when the firm's wages are above or below the industry average; (2) test for a change in the negotiating climate; (3) examine the effect of the industry-wide elasticity of demand for labor; (4) examine the effect of the industry-wide productivity of labor; and, (5) examine the possibility of serial correlation in the disturbance term.

Wage Transmission. The first variation on the model examines the possibility that the effect of the wage transmission variable is not symmetrical between values above or below 1. In order to test for this possibility, a dummy variable, Transch, which takes the value of 1 when \( \bar{w}_{t-1} \) is below 1, is interacted with the wage transmission variable.

Negotiating Climate. The second variation examines whether a change in the negotiating climate occurred in the 1980s. In order to test for this, a dummy variable, Clim, which takes the value of 1 for contracts settled during the 1983-87 time period and 0 otherwise, is added to the primary regression model.

Demand for Labor. The third variation examines if a proxy for the industry-wide elasticity of demand for labor affects wage changes in shipbuilding firms. To accomplish this, an additional variable, Wageshare, industry-wide labor
costs as a percentage of total costs, is included in the primary regression equation.

Productivity. The fourth variation on the model examines the influence of changes in industry-wide productivity on shipyard wage increases. The variable, Proch, is therefore added to the primary regression equation.

Disturbance Term. A variation on the final regression model examines whether the explanatory variable serial $AVW_{t-1}$, average annual wage increases in the previous contract, is correlated with the disturbance term. Because the explanatory variable capturing the effect of past wage changes is a function of the lagged valued of the dependent variable, the final regression model is estimated without the variable $AVW_{t-1}$.

Table 4.1 summarizes the independent variables, hypothesized signs on the coefficients, and data sources.
<table>
<thead>
<tr>
<th>Explanatory Variable</th>
<th>Hypothesized Sign of Coefficient</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/U unemployment</td>
<td>(+) BLS, Geographic Profile of Employment and Unemployment</td>
<td></td>
</tr>
<tr>
<td>$\dot{W}$ manufacturing wage change</td>
<td>(+) BLS, Employment and Earnings</td>
<td></td>
</tr>
<tr>
<td>$\bar{W}$ federal yard wage change</td>
<td>(+) DOD, Wage Fixing Authority</td>
<td></td>
</tr>
<tr>
<td>$\hat{P}_{l-1}$ price inflation</td>
<td>(+) BLS, CPI Detailed Report</td>
<td></td>
</tr>
<tr>
<td>$\bar{W}_{l-1}$ transmission</td>
<td>(-) BLS, Contracts Library</td>
<td></td>
</tr>
<tr>
<td>NA$_{l-1}$ Navy expenditures</td>
<td>(+) Census Bureau: Annual Survey of Manufacturers</td>
<td></td>
</tr>
<tr>
<td>UN unionization</td>
<td>(+) BLS, Directory of National Unions and Employee Associations and IRDIS</td>
<td></td>
</tr>
<tr>
<td>$G$ wage guidelines</td>
<td>(-) CBO, Incomes Policies in the U.S.: Historical Review and some issues, May, 1977</td>
<td></td>
</tr>
<tr>
<td>AVE$\bar{W}_{l-1}$ past wage change</td>
<td>(+) BLS, Contracts Library</td>
<td></td>
</tr>
<tr>
<td>Transch</td>
<td>(+) BLS, Contracts Library</td>
<td></td>
</tr>
<tr>
<td>Clim</td>
<td>(-) BLS, Contracts Library</td>
<td></td>
</tr>
<tr>
<td>Wageshare</td>
<td>(-) Census Bureau, Census of Manufacturers: Industry Series</td>
<td></td>
</tr>
<tr>
<td>Proch</td>
<td>(+) Census Bureau, Census of Manufacturers: Industry Series</td>
<td></td>
</tr>
</tbody>
</table>
Firm Effect

A difficulty with applying the least-squares procedure to a model using pooled data is that the assumption of a constant intercept may be unreasonable. The solution for the regression model is to introduce dummy variables, $S_1 - S_{12}$, which allow for the intercept term to vary across shipyards. If the number of shipyards is $N$, then $(N-1)$ dummy variables are added to the model since the addition of the remaining shipyard dummy variable would result in perfect collinearity among the explanatory variables. When this model is estimated using ordinary least-squares, unbiased and consistent estimates of the number of parameters, $K$, are obtained and $NT-N-K$ degrees of freedom are involved. The dummy-variable coefficients measure the difference in cross-section intercepts with respect to the omitted shipyard. The inclusion of dummy variables for $N-1$ shipyards simply accounts for the firm effect on the dependent variable. The firm dummy variables control for the individual variation of each firm by capturing all variation that is time-invariant. It appears that all explanatory factors being equal, some firms consistently negotiate more generous labor contracts than others. This may be due to unique labor market and/or bargaining characteristics not explained by the bargaining environment variables. It may also be due to differences in production methods specific to the firm which result in greater labor productivity and, therefore, higher wages.
Data

The dependent variable is the percent change in the negotiated wage rate in the first year of each contract. Wage rates for the job classification, First Class Shipfitter, were chosen because shipfitting is a skill required in all shipyards and at the same time unique to the shipbuilding industry. Shipfitters, who construct the hull of the ship, are crucial to the production process and they constitute a substantial portion of production workers in each shipyard. It was suspected that another job classification such as welders, whose skills are more transferable outside the shipyard, would better relate to the labor market variables, $1/U$ and $\hat{W}$. However, a review of the individual labor contracts revealed that first class mechanics in skills such as shipfitters, welders, and electricians are paid the same wage rate in twelve of the thirteen shipyards. Furthermore, there was no reason to believe that with regard to the other labor market variable, wage changes in nearby

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8 According to the BLS, a shipfitter "Lays out and fabricates metal structural parts, such as plates, bulkheads, and frames, and braces them in position within hull of ship for riveting or welding. Work involves the following: Laying out position of parts on metal, locating and marking reference lines, positioning parts in hull of ship, aligning parts in relation to each other, marking location of holes to be drilled, and installing temporary fasteners to hold part in place for welding or riveting; installing packing, gaskets, liners, and structural accessories and members, such as doors, hatches, brackets, and clips. May prepare molds and templates for fabrication to nonstandard parts. May tack weld clips and brackets in place prior to permanent welding. May roll, bend, flange, cut, and shape plates, beams, and other heavy metal parts" (Bureau of Labor Statistics 1988, 28).
federal shipyards, \( \hat{W} \), welders' or electricians' wages would be influenced differently from shipfitters' wages.

Cost-of-living allowances are included in the negotiated wage rate. Fringe benefits are excluded because there is no practical way to reduce fringe benefits to a cents-per-hour basis. The same exclusion also holds true for the independent variables \( \hat{W} \) and \( \hat{W} \), wage changes in manufacturing and in federal shipyards. Incentive pay, usually awarded to shipyard workers who perform hazardous duty, also was not included in wage rates because of the variations in incentive pay clauses throughout the industry.

The dependent variable is the percent change in the wage rate in the first year of each contract. Because of long-term uncertainty regarding the explanatory factors, the independent variables are more closely related to first-year wage increases.\(^9\)

The model was estimated with pooled data from a cross section of 13 large private shipyards over the time period 1968-1987. The shipbuilding firms and their corresponding labor unions, and the number of settlements in each firm that were employed for this study are given in Table 4.2.

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\(^9\) Beare (1985) reports that for all U.S. industries without COLA clauses (1,000 workers or more), the annual increase in wages in the first year for 1972 to 1981 was 8.76 percent, and 7.76 percent annually over the life of the contract (113). Hall and Taylor (1986) indicate that the difference between the first year increase and the average annual increase over the life of the contract seems to be diminishing in the years of lower inflationary expectations after 1982 (383).
<table>
<thead>
<tr>
<th>Firm</th>
<th>Union</th>
<th>Contracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama Dry Dock and Shipbuilding Mobile, AL</td>
<td>IUMSWA, Local No. 18</td>
<td>6</td>
</tr>
<tr>
<td>Bath Iron Works Bath, ME</td>
<td>IUMSWA, Local No. 6</td>
<td>6</td>
</tr>
<tr>
<td>Bay Shipbuilding Sturgeon Bay, WI</td>
<td>Boilermakers, Iron Shipbuilders, Blacksmiths, Forgers and Helpers,</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Local 449</td>
<td></td>
</tr>
<tr>
<td>Bethlehem Steel Sparrows Point, MD</td>
<td>IUMSWA, Local No. 33</td>
<td>7</td>
</tr>
<tr>
<td>General Dynamics Electric Boat Division New London, CT</td>
<td>Metal Trades Council Machinists, Lodge 1871</td>
<td>6</td>
</tr>
<tr>
<td>Jacksonville Shipyards Jacksonville FL</td>
<td>Boilermakers, Local 805</td>
<td>6</td>
</tr>
<tr>
<td>Ingalls Shipbuilding Pascagoula, MI</td>
<td>Metal Trades Council</td>
<td>7</td>
</tr>
<tr>
<td>Newport News Shipbuilding and Dry Dock Newport News, VA</td>
<td>Peninsula Shipbuilders Assoc. United Steelworkers of America</td>
<td>6</td>
</tr>
<tr>
<td>Norfolk Shipbuilding and Drydock Norfolk, VA</td>
<td>Boilermakers, Local 684</td>
<td>6</td>
</tr>
<tr>
<td>Pennsylvania Shipbuilding (formerly Sun Shipbuilding) Chester, PA</td>
<td>Boilermakers, Local 802</td>
<td>6</td>
</tr>
<tr>
<td>National Steel and Shipbuilding San Diego, CA</td>
<td>Bridge, Structural, and Ornamental Ironworkers,</td>
<td>6</td>
</tr>
<tr>
<td>Todd Shipyards Los Angeles, CA</td>
<td>IUMSWA, Local No. 9</td>
<td>6</td>
</tr>
<tr>
<td>General Dynamics Quincy Shipbuilding Quincy, MA</td>
<td>IUMSWA, Local No. 5</td>
<td>5</td>
</tr>
</tbody>
</table>
Each of the 78 observations in the equation estimated in this study is taken at the year of completion of wage negotiations between a firm and the union representing production workers (specifically shipfitters). There were approximately six observations for each shipyard depending on the length and timing of individual contracts. The General Dynamics shipyard in Quincy, Massachusetts closed in 1986 before a contract could be settled. The changes in wage rates negotiated at time t are divided by the wage rates of the previous year, all expressed as an annual percent change.

Reflecting both the absence of incentive pay systems and the prevalence of single-rate pay plans in this highly unionized industry, earnings of individuals varied little from the industry-wide average. The index of dispersion, in 1986, was among the lowest in the BLS industry wage survey program (BLS Bulletin 2295). Occupational earnings are highly concentrated, especially within individual regions. For example, three-fifths of the shipfitters in Gulf Coast ports earned between $10.00 and $10.50 per hour in 1986. On the Pacific coast, nearly half the shipfitters earned between $13.25 and $13.75 in 1986 (BLS Bulletin 2295). The concentration of wages around industry-wide averages results in relatively small variations in the dependent variable between shipyards in any observation year. Summary statistics for the dependent and independent variables employed in the estimating equation are given in Table 4.3.
Table 4.3
SUMMARY STATISTICS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean(^{10})</th>
<th>Std D</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\dot{W}) (Dep.)</td>
<td>10.176</td>
<td>6.685</td>
<td>-5.934</td>
<td>26.667</td>
</tr>
<tr>
<td>(U) (Indep.)</td>
<td>6.549</td>
<td>2.228</td>
<td>2.700</td>
<td>14.400</td>
</tr>
<tr>
<td>(\dot{W}^a)</td>
<td>6.959</td>
<td>2.599</td>
<td>.700</td>
<td>12.462</td>
</tr>
<tr>
<td>(\dot{W}^f)</td>
<td>6.294</td>
<td>3.062</td>
<td>0.000</td>
<td>15.975</td>
</tr>
<tr>
<td>(\dot{P}_{t-1})</td>
<td>6.729</td>
<td>3.395</td>
<td>.900</td>
<td>14.800</td>
</tr>
<tr>
<td>(\lambda_{t-1})</td>
<td>.986</td>
<td>.089</td>
<td>.771</td>
<td>1.281</td>
</tr>
<tr>
<td>NA/GNP(_{t-1})</td>
<td>.015</td>
<td>.018</td>
<td>.011</td>
<td>.018</td>
</tr>
<tr>
<td>NA/DEF(_{t-1})</td>
<td>.250</td>
<td>.050</td>
<td>.160</td>
<td>.290</td>
</tr>
<tr>
<td>AVE(W_{t-1})</td>
<td>7.454</td>
<td>3.497</td>
<td>-2.967</td>
<td>15.121</td>
</tr>
<tr>
<td>UN (60 Obs.)</td>
<td>21.735</td>
<td>6.960</td>
<td>11.600</td>
<td>37.900</td>
</tr>
<tr>
<td>Wageshare</td>
<td>.329</td>
<td>.024</td>
<td>.293</td>
<td>.385</td>
</tr>
<tr>
<td>Proch</td>
<td>9.387</td>
<td>6.262</td>
<td>-6.462</td>
<td>22.528</td>
</tr>
</tbody>
</table>

\(^{10}\) For the 78 observations in this model, it should be noted that the mean wage increase in the first year of the contract, \(\dot{W}\), is 10.1 percent while the average annual increase in the previous contract, \(\text{AVE}\dot{W}_{t-1}\), is only 7.4 percent indicating front loading of contracts. The mean increases in private shipbuilding compare favorably with mean wage increases in statewide manufacturing, 6.9 percent and with mean wage increases in federal shipyards, 6.3 percent. The mean first-year wage increase also is greater than the mean increase in worker productivity in the year of the settlement, 9.4 percent.
Data limitations were encountered with the bargaining power variable, UN, the union membership by state as a proportion of total employment in non-agricultural establishments. The Bureau of Labor Statistics reported this data on a biannual basis and the data for odd years was the result of extrapolation. Due to budget cutbacks at the Department of Labor, the Bureau of Labor Statistics stopped publishing this data after the 1978 calendar year. Unpublished BLS data for the year 1980 was obtained from the Bureau of National Affairs, Directory of U.S. Labor Organizations 1982. The only remaining source of data on statewide rates of unionization is the Industrial Relations Data and Information Services which has published unionization data by state for 1980 and 1982. Updated data for subsequent years is forthcoming. However, BLS's methodology employed when deriving the unionization rate is somewhat different from that of IRDIS and some interpolation is required.\footnote{Because 1975 and 1980 data was available from both BLS and IRDIS, the percentage of union membership by state for 1982 was estimated by maintaining approximately the same difference between BLS and IRDIS figures as was the case in earlier years.}

It was not possible to locate firm-specific data for the two variables which were to have served as proxies for the elasticity of demand for labor. However, in the case of the second elasticity variable, labor costs as a percentage of total costs, industry-wide data was obtained from The Bureau of Census, \textit{Census of Manufacturers: Industry Series}.\footnote{Because 1975 and 1980 data was available from both BLS and IRDIS, the percentage of union membership by state for 1982 was estimated by maintaining approximately the same difference between BLS and IRDIS figures as was the case in earlier years.}
Interpretation of the Empirical Results

Four different specifications of the model were estimated because of limited data for one variable, and in order to assess the total contribution of bargaining environment variables. Equation I, the primary regression equation, estimates the proposed regression model excluding the variable representing the rate of unionization in the state. Equation II estimates the model without the firm effect dummy variables. Equation III adds the unionization variable, UN, to Equation I, and because of missing data on this variable, it drops 18 observations. Equation IV estimates equation I with the bargaining environment variables having been excluded. Table 4.4 contains the results obtained from ordinary least squares estimation of the four specifications of the model.

Equation I

The following discussion is an interpretation of the estimated results of Equation I, the primary regression of the model. The value of the coefficient of determination, $R^2$, adjusted for degrees of freedom, indicates that Equation I, the primary regression equation of the model explains a significant proportion (over 65 percent) of the total variation in the dependent variable. This finding supports the regression model's value as a tool for explaining negotiated wage changes in private shipyards.
Table 4.4

DETERMINANTS OF NEGOTIATED WAGE CHANGES IN SHIPYARDS 1968-87
(t-statistics in parentheses)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>I 78 obs.</th>
<th>II 78 obs.</th>
<th>III 60 obs.</th>
<th>IV 78 obs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/U</td>
<td>.177 (.241)</td>
<td>-.109 (.915)</td>
<td>.229 (1.237)</td>
<td>-.016 (.138)</td>
</tr>
<tr>
<td>( \hat{W} )</td>
<td>1.122*** (4.338)</td>
<td>1.278*** (4.618)</td>
<td>1.037*** (2.882)</td>
<td>1.469*** (5.91)</td>
</tr>
<tr>
<td>( \hat{F} )</td>
<td>.364** (1.754)</td>
<td>.494** (2.248)</td>
<td>.158 (.658)</td>
<td>.207 (1.017)</td>
</tr>
<tr>
<td>( \hat{P}_{t-1} )</td>
<td>.408** (2.076)</td>
<td>.305* (1.457)</td>
<td>.28 (1.022)</td>
<td>.492*** (2.407)</td>
</tr>
<tr>
<td>( \hat{W}_{t-1} )</td>
<td>-38.501*** (3.302)</td>
<td>.803 (.13)</td>
<td>-21.83 (.948)</td>
<td></td>
</tr>
<tr>
<td>NA_{t-1}</td>
<td>147.91 (.766)</td>
<td>125.57 (.64)</td>
<td>737.85** (1.858)</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>1.342 (.672)</td>
<td>.31 (.148)</td>
<td>1.8 (.786)</td>
<td></td>
</tr>
<tr>
<td>UN</td>
<td></td>
<td></td>
<td>.322 (.744)</td>
<td></td>
</tr>
<tr>
<td>AVE( \hat{W}_{t-1} )</td>
<td>.306* (1.485)</td>
<td>.064 (.304)</td>
<td>-.361 (.893)</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>39.129</td>
<td>-6.424</td>
<td>3.952</td>
<td>.378</td>
</tr>
<tr>
<td>R^2</td>
<td>.742</td>
<td>.598</td>
<td>.664</td>
<td>.679</td>
</tr>
<tr>
<td>R^2</td>
<td>.651</td>
<td>.551</td>
<td>.478</td>
<td>.595</td>
</tr>
</tbody>
</table>

Significant at the .10 level = *, .05 level = **, .01 level = *** (one-tailed test)
The signs on all coefficients, with the exception of that on the dummy variable, G, for periods of wage controls, are those expected. Because of strong a priori ideas on the sign of the coefficients, the hypothesis tests for the statistical significance of the individual coefficients are all performed as one-tailed tests.

**Labor Market Variables**

**Unemployment.** There was no significant relationship between the inverse of the unemployment rate and the change in shipyard wages. This result is consistent with the findings of earlier studies by Hamermesh (1970), de Menil (1971), and Marcus and Reed (1974). The value of the coefficient on the inverse of unemployment is not statistically significant. The model also was estimated with a linear specification for the unemployment variable and it proved not to be statistically significant. The estimation results indicate that conditions of employment slack in statewide labor markets have very little direct effect on negotiated wage changes for skilled shipyard workers at the top of the pay scale. This may be due to the fact that union members work under contracts preventing the employer from hiring new workers at lower wages to replace laid-off workers, and thus, the competitive labor market mechanism cannot produce any observed relation between statewide unemployment and the change in wages for first class shipfitters.

The statewide rate of unemployment also may work indirectly to affect bargaining power by causing union
negotiators to modify their wage demands to reflect differences in employment options. It is evident from the estimated results that the statewide rate of unemployment does not significantly affect the wage demands of union negotiators.

**Manufacturing Wages.** The labor market variable in the model that produced the highest level of significance is the change in manufacturing wages statewide, \( \dot{W} \). Since this variable is significant at the .01 level (one-tailed test), it indicates that changes in manufacturing wages in the state help to explain negotiated wage increases in private shipyards. The value of the coefficient of 1.122 indicates that wage increases for skilled shipyard workers exceeded those in statewide manufacturing by more than 12 percent. One interpretation of this wage change differential is that the wages for first class mechanics simply reflect the market forces of supply and demand for highly-skilled labor. Another explanation of the differential is that higher wages in unionized shipyards are due to the union wage effect examined by Freeman and Medoff (1984). They report a union wage effect for blue collar workers, age 20-65, in 1979, of 19 percent for craftsmen (49).

**Federal Shipyard Wages.** The other alternative wage-rate variable, wage changes at nearby federal shipyards, \( \ddot{W} \), is significant at the .05 level (one-tailed test). The value of the coefficient of .364 indicates that during the time-frame of the study, 1968-1987, percentage wage
increases in nearby federal shipyards exceeded those in unionized shipyards in the private sector.

In summary, the estimated equation produced mixed findings on the influence of local labor market variables. Statewide unemployment rates did not significantly influence wage settlements for skilled workers in the highly unionized shipbuilding industry. However, the estimated equation did find significant relationships between wage increases in alternative forms of employment in both statewide manufacturing and in nearby federal shipyards, and wage increases in private shipyards. These findings are strong evidence of comparative wages in the labor market setting the bounds on the final wage settlement.

**Consumer Price Inflation**

The lagged regional consumer price inflation variable, \( \hat{P}_{t-1} \), proved to be significant at the .05 level (one-tailed test). The significance of the consumer price variable indicates that shipyard labor negotiators arrive at settlements that account for the effect of inflation on workers' wages. Because the value of the coefficient on this variable (approximately .40) is less than one, it is apparent that during the 1968-1987 time period, shipyard workers, along with blue-collar workers in most industries, were not able to negotiate wage increases that compensated for the erosion of their standard of living, holding all else constant.
Bargaining Environment Variables

Wage Transmission. The first bargaining variable, the wage transmission variable, \( \bar{w}_{t-1} \), captures the influence of wage settlements in other shipyards on negotiated wage changes in the \( i \)th shipyard. The coefficient on the wage transmission variable, significant at the .01 level, is both large in magnitude and of the hypothesized negative sign. These results indicate a leveling out effect in which wages throughout the industry tend to move toward the industry-wide average. If wages in the year preceding negotiations in the \( i \)th shipyard are higher/lower than in other shipyards, wage increases tend to be smaller/larger in order to keep wages in line with industry-wide norms. In other words, a union is more effective in obtaining wage increases when its wages are below the industry average. Because the wage transmission variable, which measures intra-industry feedback, was found to be highly significant, the evidence suggests a comparative wage mechanism working to influence where the wage settlements in the shipbuilding industry fall along the range of indeterminacy in the bilateral monopoly model. These findings are consistent with qualitative data from the case study which indicated that negotiators on both sides closely follow other labor settlements in the industry.

Past Settlements. As a result of information obtained from case study interviews, the bargaining environment variable, \( AVE\bar{w}_{t-1} \), was included in the regression model.
This expectations variable measures the average annual wage increase during the life of the previous contract. The coefficient on this variable is of the hypothesized positive sign and it is significant at the .10 level (one-tailed test). These findings indicate that shipyard workers look to past wage increases as a measure of what they expect to receive in current negotiations. It is clear that expectations do play an important role in the determination of shipbuilding wage settlements.

A potential problem with employing this variable is that it may better explain the influence of worker expectations in times of general inflation than in times of disinflation. In fact, excessive wage increases in previous contracts may also serve to increase managements' resolve to resist wage increases in periods of disinflation. Just such a mismatch in expectations occurred in the 1985 BIW labor dispute. The results of the estimated equation indicate that for the entire 1968-87 time period, worker demands for continued large wage increases, following a generous contract, have tended to overcome management resistance. In other words, generous wage settlements tend to produce continued generous wage settlements, especially in periods of general macroeconomic wage inflation. These findings may also be interpreted to mean that, for a particular firm, bargaining power may be relatively constant over time.

Navy Expenditures. The bargaining environment variable, $N_{t-1}$, is the ratio of the value of Navy
shipbuilding contracts to the level of defense expenditures, both lagged one time period. Although the coefficient on this variable is large in magnitude and of the hypothesized positive sign, it is not statistically significant. This finding indicates that the dollar value of Navy shipbuilding contracts relative to the level of defense expenditures has little bearing on wage negotiations in the shipbuilding industry. Two alternative versions of this variable, the ratio of the value of Navy shipbuilding contracts to the size of the economy, and to the level of federal expenditures also proved to be not statistically significant.

Several reasons can be posited for failure of this variable to contribute to the explanatory power of the model. First, for much of the observed time period, the Navy was not the only customer of the shipyards. In the past, these shipyards constructed ships for other government agencies, ships for private industry and oil platforms. Although the Navy is the primary customer, it has not always been the only customer.

Second, since this variable focuses on the value of Navy shipbuilding contracts, it serves as an indirect measure of the demand for shipyard labor. However, even though the industry may receive an increase in Navy contracts, there is a time lag before the demand for production workers increases. Case study interviews with union negotiators revealed that their primary source of bargaining power was the immediate need for production workers in the shipyard.
Another factor which may have affected this variable is that during the Navy fleet buildup of the early 1980s, Secretary of the Navy John Lehman increased the competition for Navy contracts by requiring second sources for Navy programs, beginning in 1983. During the same time frame, the Navy increased competition for overhaul work by awarding more overhaul work to federal shipyards. The increased competition in the industry may have resulted in downward pressure on wage settlements in the industry during a period of increases in the value of Navy shipbuilding contracts. This could provide an explanation for why the coefficient on $NA_{t-1}$ is significant in Equation III which only includes observations for the years 1968-82. In the next section, a test for a change in negotiating climate is explored.

Wage Controls. The final bargaining environment variable in Equation I is $G$, a dummy variable activated during periods of wage controls in the early 1970s. The coefficient on the wage guideline variable is not of the hypothesized negative sign, and it is very small in magnitude. The wage guideline variable, $G$, was not found to be statistically significant. This finding differs from previous studies by de Menil (1971) and Farber (1978) which found wage controls in the 1960s to have a negative impact on wages, and from Flanagan's (1976) study which found that for U.S. manufacturing: (1) incomes policy under Nixon (1972-73) appeared to restrain wages in the union sector;
and (2) non-union wage changes were significantly higher during the policy period.

However, by exercising the collective voice of all production workers, a union may influence a company to settle a contract when wage controls are not in effect. In fact, wage controls had very little impact on a 14.5 percent wage settlement at Ingalls Shipbuilding on November 1, 1971, signed two weeks after the expiration of the initial 90 day wage freeze. When Equation I is estimated with the observation for Ingalls in 1971 deleted, there is a significant reduction in the magnitude of the coefficient on the wage control variable, G, but it is still of the wrong sign.

Another problem with the wage controls dummy variable is that wage controls were not uniformly imposed over the entire period covered. The first phase, starting in mid-August 1971 and lasting ninety days, involved a comprehensive wage freeze. Under Phase II of the program, which lasted through December, 1972, wage increases were in general limited to 5.5 percent per year. Under Phase III which began in early 1973, the program shifted from a mandatory status to a largely voluntary status. Interestingly, during this relaxed "window of opportunity" several shipyard contracts were settled. As a result of inflation pressure, Phase IV, a second freeze began in the summer of 1973 and was followed by a gradual or selective approach to decontrol until the program expired in early 1974 (Congressional Budget Office 1977).
Equations II, III and IV

Because of missing data on the unionization variable, UN, and in order to test the firm effect and the total effect of the bargaining variables, three additional specifications of the primary regression equation are given in Equations II, III, and IV on Table 4.4.

Unionization. The final bargaining environment variable, UN, the percentage of the labor force which is unionized statewide, is included in the third regression equation. Equation III is limited to sixty observations for the period 1968-1982 because of data limitations explained in the previous section. The coefficient on the unionization variable was of the hypothesized positive sign; however, for the 1968-1982 time period, the variable was not statistically significant. The estimated results indicate that for at least the 1968-1982 time period, there was no observed relation between the percent of the work force unionized in the state and the change in shipyard wages.\(^\text{12}\)

One problem inherent in this variable as well as with the other statewide variables, 1/U and \(\hat{W}\), is that the local labor market supporting a particular shipyard may be limited to only a portion of a large state such as California. The local labor market may also extend beyond state lines. Ingalls Shipbuilding, on the border of Mississippi and

\(^{12}\) It is of interest to note that the coefficients on \(\hat{p}_{t-1}\) and \(\hat{F}\) are insignificant in Equation III which only includes observations in the years 1968-82.
Alabama is a primary example. In such cases it may have been appropriate to construct a regional variable by combining data from neighboring states.

**Total Contribution of Bargaining Variables**

Insofar as three of the five bargaining environment variables utilized in the regression model, $NA_{t-1}$, UN, and $G$ prove not to contribute individually to the explanatory power of the model, the logical next step is to examine the total contribution of the bargaining variables. Therefore, the model is estimated using Equation IV which excludes all variables related to bargaining environment. A comparison of the coefficient of determination, $R^2$ and performing an F-test for the restrictions imposed in Equation IV leads us to reject the null hypothesis that the combined contribution of the bargaining environment variables utilized in this study add no appreciable explanatory power to the model. These findings indicate that as a group, the explanatory variables chosen to represent the bargaining environment significantly do help to determine wage settlements in the shipbuilding industry. Once the bounds on the settlement are set by conditions in the local labor market, bargaining power is instrumental in determining the position of the settlement along the range of

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13 Two bargaining power variables that were to have functioned as proxies for the elasticity of demand for labor were reluctantly dropped because of data limitations.

14 It should be noted that the coefficient on $WF$ is insignificant in Equation IV.
possible outcomes. Although these results are encouraging, it is possible that the model would better explain wage changes if firm specific data were available on the short-run demand for production labor at the time of the contract negotiation. Hopefully, future studies of wage-rate determination will take these findings into account before trying to construct variables that capture the effect of the bargaining environment in which negotiations take place.

**Firm Effect**

The large negative values of the coefficients and the significant t-statistics (all significant at the .01 level, two-tailed test) for the shipyard dummy variables indicate that wage changes in the baseline shipyard, Todd, Los Angeles, were significantly different from those in the other shipyards. The mean value of the 12 coefficients was -14.88 and values ranged between -19.30 to -9.64. As expected, the smallest change in the intercept was found in the other West Coast shipyard, NASCCO in San Diego. It appears that shipyards on the West Coast consistently negotiate larger wage increases than predicted on the basis of variables included in the estimating equation. The findings on the shipyard dummy variables indicate regional labor cost differentials in the shipbuilding industry consistent with findings in a 1976 Department of Commerce report to Congress.\(^\text{15}\)

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\(^{15}\) The report cited a differential for direct and indirect labor costs, including fringe benefits, of the West Coast 5.7 percent higher than the East Coast and 13 percent higher than the Gulf Coast (Department of Commerce 1976).
Coast shipyards historically have paid high wages and this may be due to the bargaining strength of dockside unions on the West Coast and to the competition for skilled production workers following the growth of the aerospace industry in California.

In order to examine the total contribution of the firm specific dummy variables, Equation I is estimated with the firm dummies, \( S_1 - S_{12} \), having been deleted. The results of the estimation, given in Equation II, are that although the labor market and price inflation variables remain significant, the bargaining environment variables all become insignificant. In addition, an F-test for the joint significance of the bargaining variables in the model without the firm variables, indicates the bargaining variables also are insignificant as a group. These results confirm the fact that the firm dummy variables are controlling for the omitted firm-specific characteristics of each firm, and that, if they are deleted from the model, the bargaining variables no longer can provide significant information about the bargaining environment affecting individual firms. In other words, the firm dummy variables control for the individual variation in each firm so that the individual effect on wages of each bargaining environment variable can be observed. Without the firm dummy variables, the value of the coefficient of determination, \( R^2 \), for Equation II decreases from .742 to .598. Equation II suffers from a classic case of specification bias due to omitted firm dummy
variables. In other words, the firm dummy variables do significantly help to explain the variation in shipyard wage increases.

Union Effect

Because the model estimates wage changes in situations of bilateral monopoly where one union negotiates with one firm, it was suspected that all other explanatory factors being equal, some unions consistently negotiate larger wage increases than others. For this reason, the model was estimated with $N-1$ union dummy variables included, and the firm dummy variables having been deleted. It was necessary to delete the firm dummy variables in order to avoid problems with multicollinearity.

When the model is estimated with union dummy variables, the variables proved to not be statistically significant. The results of this estimation indicated that there is no significant difference in bargaining results among the different unions representing shipyard workers, all else equal. These findings should be of interest to shipyard workers when deciding which union to represent them in contract negotiations.

Summarizing the findings on the bargaining environment variables, it is evident that the factors related to comparative wages have a significant impact on negotiated wage increases. The wage transmission variable, $\hat{W}_{t-1}$, compares a shipyard's past wage increases to wage increases in other shipyards. The variable, $\text{AVE}\hat{W}_{t-1}$, compares anticipated wage
increases with wage increases in the previous contract. Both variables are found to be significant. However, the other three bargaining environment variables, $NA_{t-1}$, $UN$, and $G$, all prove to be statistically insignificant. These findings point to a comparative wage mechanism as having a significant impact on bargaining power during shipyard wage negotiations. Comparative wages in the industry play an important role in determining where the settlement will fall along the range of indeterminacy evident in the bilateral monopoly model. Large wage increases in other shipyards and in the previous contract both tend to influence the settlement up toward the union wage, $OU$, along the indeterminate range, $U-C$, in the bilateral monopoly model given in Figure 1.

**Variations on the Model**

As discussed in the section on the formulation of the model, four variations on the basic model are estimated in order to: (1) test the possibility that a union's ability to increase wages when the firm's wages are below the industry average is different from when wages are above the average; (2) test for a change in the negotiating climate; (3) examine the effect of the industry wide elasticity of demand for labor; and (4) examine the effect of the industry-wide productivity of labor. Table 4.5 provides the results obtained from ordinary least squares estimation of four variations on Equation I, the primary regression equation
Table 4.5
VARIATIONS ON THE REGRESSION MODEL
(t-statistics in parentheses)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Ia</th>
<th>Ib</th>
<th>Ic</th>
<th>Id</th>
</tr>
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<tr>
<td>1/U</td>
<td>.166</td>
<td>.14</td>
<td>.191</td>
<td>.169</td>
</tr>
<tr>
<td></td>
<td>(1.192)</td>
<td>(.972)</td>
<td>(1.202)</td>
<td>(1.183)</td>
</tr>
<tr>
<td>( \hat{W} )</td>
<td>1.131***</td>
<td>.904***</td>
<td>1.121***</td>
<td>1.093***</td>
</tr>
<tr>
<td></td>
<td>(4.48)</td>
<td>(2.979)</td>
<td>(4.298)</td>
<td>(4.196)</td>
</tr>
<tr>
<td>( \hat{W}^F )</td>
<td>.375**</td>
<td>.294*</td>
<td>.365**</td>
<td>.375*</td>
</tr>
<tr>
<td></td>
<td>(1.852)</td>
<td>(1.385)</td>
<td>(1.746)</td>
<td>(1.804)</td>
</tr>
<tr>
<td>( \hat{P}_{t-1} )</td>
<td>.429**</td>
<td>.232</td>
<td>.403*</td>
<td>.315*</td>
</tr>
<tr>
<td></td>
<td>(2.235)</td>
<td>(.989)</td>
<td>(2.024)</td>
<td>(1.429)</td>
</tr>
<tr>
<td>( \hat{W}_{t-1} )</td>
<td>-24.098**</td>
<td>-34.182***</td>
<td>-38.972***</td>
<td>-37.663***</td>
</tr>
<tr>
<td></td>
<td>(1.776)</td>
<td>(2.846)</td>
<td>(3.254)</td>
<td>(3.217)</td>
</tr>
<tr>
<td>NA(_{t-1})</td>
<td>158.29</td>
<td>320.24*</td>
<td>131.166</td>
<td>225.289</td>
</tr>
<tr>
<td></td>
<td>(.839)</td>
<td>(1.391)</td>
<td>(.623)</td>
<td>(1.073)</td>
</tr>
<tr>
<td>G</td>
<td>1.381</td>
<td>1.039</td>
<td>1.351</td>
<td>1.627</td>
</tr>
<tr>
<td></td>
<td>(.708)</td>
<td>(.521)</td>
<td>(.671)</td>
<td>(.805)</td>
</tr>
<tr>
<td>AVE( \hat{W}_{t-1} )</td>
<td>.259</td>
<td>.211</td>
<td>.319*</td>
<td>.231</td>
</tr>
<tr>
<td></td>
<td>(1.277)</td>
<td>(.973)</td>
<td>(1.472)</td>
<td>(1.043)</td>
</tr>
<tr>
<td>Transch</td>
<td>3.394**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.95)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clim</td>
<td>-3.418*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.352)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wageshare</td>
<td></td>
<td></td>
<td>-6.53</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.208)</td>
<td></td>
</tr>
<tr>
<td>Proch</td>
<td></td>
<td></td>
<td>.103</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.934)</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>21.909</td>
<td>34.748</td>
<td>41.99</td>
<td>36.79</td>
</tr>
<tr>
<td>R(^2)</td>
<td>.758</td>
<td>.75</td>
<td>.742</td>
<td>.746</td>
</tr>
<tr>
<td>( \bar{R}^2 )</td>
<td>.667</td>
<td>.656</td>
<td>.645</td>
<td>.65</td>
</tr>
</tbody>
</table>

Significant at the .10 level = *, .05 level = **, .01 level = *** (one-tailed test)
of the model. For each variation, a single explanatory variable is added to equation I.

**Wage Transmission.** The first variation on the model is concerned with the specification of the wage transmission variable. It was suspected that a union's ability to increase wages when the wage rate in the firm is below the industry average is different from when wages are above the average. In order to test for this possibility, a dummy variable which takes the value of 1 when \( \bar{w}_{t-1} \) is below one, is interacted with the wage transmission variable. When the regression model is estimated with the new interactive variable, Transch, included, the variable is significant at the .10 level (one-tailed test) and its magnitude of +3.394 indicated a substantial change in the magnitude of the coefficient on the transmission variable for values of \( \bar{w}_{t-1} \) below 1. In other words, when the wage transmission variable is below 1, it has a different effect on wage increases than for values above 1. The sign on the coefficient of the new variable, Transch, is of the hypothesized positive sign.

The results of this estimation, given in Equation Ia on Table 4.5, confirm suspicions that the wage transmission effect is not symmetrical between values of \( \bar{w}_{t-1} \) above or below one. In other words, firms may be more effective in limiting wage increases when the firm's wages are above the industry average than the union is effective in obtaining large wage increases when the firm's wages are below the
industry average. A possible explanation is that firms may better utilize industry comparative wage data to their advantage in contract bargaining. This explanation is consistent with interview data from the case study. The results of estimating the interactive variable, Transch, are depicted in Figure 3.

![Figure 3. Wage Transmission](image)

**Negotiating Climate.** The next variation on the model concerns a change in negotiating climate during the time period covered by the study. Case study interviews and background research on the history of the shipbuilding industry revealed a definite change in the negotiating climate in the early 1980s. It seems that for a variety of reasons, the fortunes of shipyard workers took a decided turn for the worse, starting about the time of the early settlement at Ingalls Shipbuilding in 1983. Federal subsidies to the shipbuilding industry ended in 1981 and much
of the new private sector shipbuilding contracts followed the cheap labor market overseas. The 1980s also were a difficult period for all of organized labor as President Reagan signaled a hard line attitude toward federal employee unions with the defeat of PATCO in 1981. Wage increases for non-union workers actually out-paced those of unionized workers for much of the 1980s. Beginning in 1983, Secretary of the Navy John Lehman pushed hard for second sources for new construction contracts awarded by the Navy. No longer was the lead contractor for a weapon system guaranteed a majority of the additional contracts to be awarded. During this period, the Navy also began to award more overhaul contracts to federal shipyards, resulting in more competition for the remaining contracts among private shipyards. Data from case study interviews and background research indicates that in the 1980s, wage increases for shipyard workers were less than predicted on the basis of variables included in the regression equation. For these reasons, a variation on the model adds a dummy variable which takes the value of 1 for contracts settled during the 1983-87 time period. The expected sign on the coefficient of the negotiating climate dummy variable is negative because the change in bargaining climate had an adverse effect on wage increases.

The results of estimating Equation Ib indicate that all explanatory factors being equal, a definite change in the pattern of wage settlements for skilled shipyard workers
occurred in the 1980s. The coefficient on the negotiating climate variable, Clim, is large in magnitude, (-3.418) and of the hypothesized negative sign. The variable is significant at the .10 level (one-tailed test). Contributing to this change were the overall decline in the U.S. shipbuilding industry, the change in Navy contracting policy, the increase in repair work awarded to federal shipyards, and the anti-labor climate of the Reagan years.

When the dummy variable, Clim, is added to Equation I, it accounts for the changes in Navy policy which took place in the years, 1983-87, and consequently, the Navy expenditure variable, $\text{NA}_{t-1}$, becomes statistically significant and the value of its coefficient more than doubles. When the negative impact of a change in Navy purchasing policy is captured by the dummy variable, then the overall positive influence of the relative level of Navy expenditures on wages can be more clearly observed.

Another factor contributing to the change in negotiating climate was the dramatic decrease in consumer price inflation, beginning in the economic recession of 1982. When the dummy variable for climate change is added to Equation I, it controls for the decrease in the rate of inflation, and the consumer prices variable, $\hat{p}_{t-1}$, is no longer statistically significant.

**Demand for Labor.** The next variation on the model concerns the elasticity of demand for shipyard labor. Because firm-specific data was not available, the bargaining
environment variables that were to have served as proxies for the elasticity of demand for labor were reluctantly dropped from the model. However in the case of the second variable, labor costs as a percentage of total costs, industry-wide data was obtained from the Bureau of Census. The ratio was calculated by using wages for production workers in the numerator, and total costs in the denominator, where total costs equal the sum of: (1) payroll for all employees, (2) cost of materials, and (3) new capital expenditures. In order to examine if the industry-wide elasticity of demand for labor affects wage changes in shipbuilding firms, Equation I is estimated with the added industry wide variable, Wageshare. The results of estimation of Equation Ic, are that the magnitude of the coefficient on the industry-wide variable, Wageshare, is large, (-6.5), and of the hypothesized negative sign. However, this variable is not significant, perhaps indicating that the industry wide figures do not exhibit enough variation to significantly explain wage changes in shipbuilding firms. For example, the standard deviation of the variable Wageshare is .024. However, controlling for industry-wide changes in elasticity of demand for labor does allow us to observe the impact of the previous contract on current wage settlements as indicated by the significant positive coefficient on AVEW_{t-1} in Equation Ic.

**Productivity.** The final variation on the model adds the explanatory variable, Proch, which captures the
influence of changes in industry-wide productivity on wage increases. In his model of wage determination under conditions of bilateral monopoly, de Menil (1971) includes the net value of productivity per worker as a bargaining power explanatory variable, and he obtains mixed results from this variable.

The measure of shipbuilders' productivity obtained from the Bureau of Census is the change in value added per production worker hour in the year of the contract settlement. The changes in productivity in time $t$ are divided by the productivity of the previous year, all expressed as an annual percent change. The results of adding the productivity variable, Proch, to the model are given in Equation 1d. Although the sign on the coefficient of the industry-wide variable is of the hypothesized positive sign, Proch was not statistically significant. This finding indicates that industry-wide changes in productivity do not have a significant effect on wage increases. As with the previous variation on the model, firm data on worker productivity may have provided a more appropriate explanatory variable.

In summary of the variations on the model, the variables added as a result of data from case study interviews and background research, Transch and Clim, both contributed to the explanatory power of the model. However the variables added to the model using industry-wide data, Wageshare and Proch, were both found to be insignificant. One explanation is that firm-specific variables will tend to vary
more from the mean, resulting in more precise estimates of 
the coefficients, and therefore, increasing the likelihood 
of statistical significance. The results of estimating four 
variations on the model lead to the conclusion that in 
models of wage-rate determination, the closer a variable can 
be identified with the firm, the better.

In addition, the results of estimating the primary 
regression equation with all four variations included are 
given in Table 4.6, Equation Ie. The estimated results 
support the findings given in Table 4.5 that variables based 
on industry-wide data have a lesser likelihood of statisti-
cal significance.

A final regression model which excludes the two vari-
ations based on industry-wide data is given in Table 4.6, 
Equation If. A potential problem exists in the final 
regression model with the explanatory variable, AVER\textsubscript{W-1}, 
which captures the influence of past average wage increases 
on current negotiations. When using pooled-time series and 
cross-section data with firm-dummy variables, introducing a 
variable which is a function of the lagged dependent vari-
able into a "fixed effects" model can lead to biased esti-
mates (for further discussion, see Maddala 1987, 312-313; 
Hsiao 1986). This is because, the lagged endogenous vari-
able which is included as an explanatory variable, is corre-
lated with the disturbance term and this leads to biased 
coefficients. In order to examine this possibility, the 
final model is estimated without the variable, AVER\textsubscript{W-1}. The
Table 4.6
VARIATIONS ON THE REGRESSION MODEL (CONTINUED)
(t-statistics in parentheses)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Ie</th>
<th>If</th>
<th>Ig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/U</td>
<td>.158</td>
<td>.137</td>
<td>.122</td>
</tr>
<tr>
<td></td>
<td>(1.008)</td>
<td>(.973)</td>
<td>(.872)</td>
</tr>
<tr>
<td>$\hat{\alpha}$</td>
<td>.898***</td>
<td>.957***</td>
<td>.971***</td>
</tr>
<tr>
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Significant at the .10 level = *, .05 level = **, .01 level = *** (one-tailed test)
estimated results, given in Equation Ig indicate that the introduction of past average wage increases does not seriously affect the regression model.

Conclusion

Labor costs for production workers historically have been a large component of total costs in the shipbuilding industry. It is therefore important to understand the factors which influence wage settlements in this highly unionized industry. This study, an extension of previous empirical studies on wage-rate determination, uses pooled microeconomic data on negotiated wage rates in thirteen large private shipyards for the 1968-87 time period.

The regression model was constructed to examine the influence on shipyard wage settlements of conditions in the local labor market, cost-of-living pressures, and the bargaining environment in which negotiations take place. The aim of the study is to identify those factors which influence limits of the range, and which affect the outcome of contract settlements along the range of indeterminacy evident in the model of bilateral monopoly in the market for labor.

Conditions in the labor market, and increases in the cost of living affect the supply and demand for shipyard labor, and therefore, help to establish the boundaries on the range of indeterminacy. The factors which impact upon the bargaining environment help to establish where the
outcome of a negotiation will fall along the range of possible outcomes.

The estimated results indicate that the regression model explains a significant proportion (over 65 percent) of the variation in the dependent variable. These findings support the model's value as a tool for determining wage increases in the shipbuilding industry.

The findings on the estimated results of variables chosen to represent conditions in the local labor market were mixed. Although statewide unemployment rates did not significantly influence shipyard wage settlements, the wage increases in both statewide manufacturing and in nearby federal shipyards were found to have a significant influence. These findings point to comparative wages in the labor market as being instrumental in setting the boundaries on the wage settlement.

The lagged regional change in the cost-of-living index also has a significant influence on wage changes in the shipbuilding industry. It is evident, that during the 1968-1987 time period, shipyard labor negotiations were affected by changes in the cost of living. However, in the shipbuilding industry, unions were not very successful in negotiating wages that compensated for increases in the cost of living. The significance of this variable indicates that past increases in the cost of living contribute to establishing the boundaries on the wage settlement in the bilateral monopoly model.
The regression model in this study also views a union's ability to influence wage settlements to be a function of the bargaining environment in which negotiations take place. Therefore, five explanatory variables were used to capture the influence of the bargaining environment. The results of including the wage transmission variable indicate a strong leveling-out effect, wherein wages throughout the industry tend to move toward the industry-wide average. These findings point to the conclusion that comparative wages within the shipbuilding industry also play an important role in the determination of bargaining power during shipyard contract negotiations. It is clear that wage increases in other shipyards influence where the settlement will fall along the range of indeterminacy in the bilateral monopoly model.

In addition, a variation on the model tests whether the effect of wage transmission is symmetrical for values above or below 1. The results of this estimation confirm case study data indicating that firms may be more effective in limiting wage increases when the transmission variable is above 1 than unions are effective in obtaining large wage increases when the transmission variable is below 1.

Another variation on the regression model examines the possibility of a change in the negotiating climate during the latter part of the time period covered by this study. The results of adding a dummy variable which takes the value of one for contracts settled between 1983-87, indicate a definite change in the pattern of wage settlements which had
an adverse effect on shipyard wage increases. A decline in
the domestic shipbuilding industry, the Reagan appointments
to the NLRB, and the change in Navy procurement policy all
contributed to the reversal in shipyard workers' fortunes
during a period of naval build-up of the fleet.

The other significant bargaining environment variable
captures the influence of the average annual wage increase
during the life of the previous contract. The estimated
results indicate that union negotiators look to past wage
increases as a measure of what they expect to receive in
current negotiations. It is clear that union expectations,
based on past settlements, are an important factor in the
determination of shipyard wages. Past wage increases in-
fluence where the settlement will fall along the range of
indeterminacy.

A significant revelation of this study is the important
role played by comparative wages in both setting the bounds
on the settlements and in determining the outcome of the
wage settlements under conditions of bilateral monopoly in
the highly unionized shipbuilding industry. Comparative
wage increases in statewide manufacturing and in nearby
federal shipyards help set the bounds on the settlement as
displayed in the bilateral monopoly model, and wages in
other large private shipyards nationwide and in past settle-
ments significantly influence the final outcome of contract
negotiations along the range of indeterminacy.
None of the other three bargaining environment variables used in the regression model, the relative level of Navy expenditures, statewide rates of unionization, and periods of wage controls, proved to individually contribute to the explanatory power of the model. However, when the total contribution of all bargaining environment variables is examined, the estimated results indicate that, as a group, the variables chosen to represent the bargaining environment do significantly help to determine wage settlements in the shipbuilding industry. The findings of this study point to the importance of the bargaining environment when determining the balance of bargaining power, and thus, the position of the settlement along the range of indeterminacy. These findings are consistent with those of de Menil (1971) who also found that bargaining power variables added to the explanatory power of his model. As the CEO of BIW indicated, "the bargaining environment is equal to the table in importance" (Haggett 1988).

The estimated results of the regression model are consistent with the following findings: (1) the boundaries on the settlement are set, in part, by conditions in the local labor market and cost-of-living pressures, and (2) the overall bargaining environment is instrumental in determining the position of the settlement along the range of possible outcomes. These findings lead to the conclusion, that in order to examine labor settlements under conditions of bilateral monopoly, models of union wage-rate
determination must account for both the labor market forces of supply and demand, and the bargaining environment indicated by the institutional and structural framework in which negotiations take place.
CHAPTER V

HISTORICAL AND SOCIAL CONTEXT

Introduction

The purpose of this prologue is to shed light on the social and historical conditions of the labor dispute in the summer of 1985 at Bath Iron Works. A critical task for bargainers, say Bacharach and Lawler (1981), "is to translate into tactical action, resources and constraints embedded in the social, economic and historical circumstances surrounding the relationship between the union and management" (41).

In order to better understand what transpired during the BIW labor dispute, it is essential to review the historical and social context in which the negotiations took place. Setting the social and historical context requires a brief history of the company and its contracts with the Navy, the parent corporation, the decline in U.S. shipbuilding, and labor-management relations in the shipyard.

Bath Iron Works

Bath Iron Works is one of a handful of major commercial shipyards still in operation in the United States today. For the city of Bath, Maine, BIW is the last in a two-century succession of shipyards that have occupied the three-mile-long waterfront along the Kennebec River. More
shipyards have existed along this stretch of shoreline than upon any comparable piece of real estate anywhere in the western hemisphere. "The history of America's shipbuilding industry is closely mirrored in the history of Bath and Bath Iron Works" (Snow 1987, 12).

For decades, BIW has been known as one of the most reliable shipbuilders in the U.S. "It regularly delivers ships on time and within cost estimates and has a loyal work force that turns out top-quality products" (Buell and Payne 1985, 88). In such knowledgeable sources as Naval Proceedings the seaworthy characteristics of Bath-built ships are well documented. During World War II, workers at the Bath Shipyard fought the good fight by turning out 82 destroyers--more that Japan's wartime total (Stipp 1985).

Even more impressive than this record is that during the same period, key BIW personnel designed and supervised the construction, and provided the initial work force for two additional shipyards in South Portland, Maine. In five years, these two other shipyards built 274 Ocean Class and Liberty-type cargo vessels (Snow 1987).

BIW is the largest, with a work force of 10,500, and one of the best paying private employers in a not very prosperous state. At the 54 acre shipyard on the Kennebec River, "three generations of Down-Easters work together, the youngest receiving unofficial supervision, while their fathers, brothers and uncles protect the 'family' paycheck by making certain that work is properly done" (Frank 1984,
58). The pride in the quality of the product and the commitment to the shipyard by the labor force goes back many generations at BIW. Traditions of the past are deeply rooted in the BIW psyche. At BIW, there is a longstanding tradition of "a fair-day's work for a fair-day's pay" and Maine workers do not shy away from working hard for their pay. The doctrine of "fairness" at BIW can be seen in this anecdote from the shipyard's W.W.II contract experience:

It was evident by late 1942 that BIW's price for 2,000-ton destroyers would yield such high profits that the company would be forced through renegotiation or the excess profits tax to return large sums to the U.S. Treasury's general fund. [CEO] Newell decided to voluntarily refund the excess monies directly to the customer—-in this case the Navy (Snow 1987, 335).

This strong work ethic has contributed significantly to BIW's impressive profitability in recent years. Business Week reported that "industry experts believe that Bath's return on capital is close to the highest in the industry" (Buell and Payne 1985, 90). One factor responsible for the profitability is the high productivity of Bath workers. In December, 1959 BIW delivered to the Navy the first guided-missile frigate to enter naval service in only thirty-seven months, shaving ten months off the contract schedule.

Another factor contributing to BIW's performance is its stable work force. Workers with 30 years' tenure are commonplace and 40-year veterans are not a rarity. Annual employee turnover is only about 0.6 percent compared with an industry average of 10 times that.
BIW also has invested heavily in Japanese modular technology which it has pushed further than other Navy shipbuilders. Bath has spent more than $12 million for Japanese consulting services, and the company is still shelling out $4 million a year for Japanese production know-how. A highly visible example is the 400 foot automated crane built from Japanese rice paper blueprints. In 1978, BIW completed the first Navy contract in twelve years that was finished before its deadline. According to the Shipbuilders Council of America, BIW earned a conservatively estimated 21 percent return on 24 guided missile frigates built at a time when other shipbuilders were earning about a 10 percent return.

Since 1972, the company has cut man-hours on many shipbuilding tasks by up to 30 percent. Modular technology has cut BIW's outdoor work by 60 percent. In addition to modular production methods, BIW uses a system called process flow lanes which concentrates specific types of work at a single spot in the yard and moves ship modules to them. "Bath is putting a substantially greater amount of effort into design and planning up front," says a shipbuilding consultant (Buell and Payne 1985, 90). Management claimed that by the time BIW builds its fourth cruiser, it will have the same expertise as Ingalls will on its tenth cruiser.

The combination of a hard working, loyal and productive work force with Japanese production techniques made BIW the 27th largest defense contractor in the U.S. by 1985--only
one notch below GM and AT&T. In sum, the longstanding
tradition established at BIW was to have management and
labor cooperate over the decades to produce high quality
ships for the Navy while staying under budget and ahead of
schedule.

The Congoleum Buy-out

This harmonious picture at BIW changed drastically in
recent years because of the take-over of BIW by an out-of-
state conglomerate. The chronology of events surrounding
this buy-out is as follows:

In 1975, a holding company called Congoleum was created
which owned BIW, a flooring division and a mobile home
furnishing division. Early on, Eddy Nicholson, Executive
Vice President and Chief Financial Officer of Congoleum with
specific responsibility for Bath Iron Works, minced no words
with the press:

We aren't going to put another cent into BIW
....It is up to the present management team to
either put the pieces back together or we will be
looking for a way to retrieve our investment in
the shipyard. We are not in the business of
providing jobs, although we do when we can. Our
first responsibility is to our shareholders, and
at this rate we would serve them better by selling
BIW and putting our money in the bank" (Portland

Nicholson's strong words "appeared to reinforce the image of
a remote management, endlessly scanning the balance sheets
and profit-loss statements, incapable of entering anything
into the equation that cannot be quantified" (Snow 1987,
521).
In 1980, First Boston put together a group of investors and approached Byron Radaker about buying the company's 11.7 million shares of stock for $38.00 a share—the open market price was then $24.00 a share. Radaker and Nicholson were made equity partners and Congoleum became a privately held corporation.

In 1984, Forbes claimed that it was rumored that Congoleum intended to "go public" again (Frank 1984, 62). When asked the purpose of "going private," Radaker told Newsweek that "A lot of people miss the point; you have the obligation to sell it out" (Pauly and Namuth 1984, 73). After paying down their original loans and watching their stock value rise, the executives technically formed a new company, and leveraged themselves to the hilt again—simultaneously increasing their share in Congoleum's stock from 18 percent to 70 percent. "I walked out of the room substantially wealthier and with a bigger share of the equity," said Radaker. "I could make a career of it" (Pauly 1985, 51).

One of the great advantages of "going private" is that it is no longer necessary to provide profit and loss statements to stockholders. As a consequence, private

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In leveraged-buyout situations, corporate management has to concentrate on paying off its new debt, which means running the company for cash flow rather than profits. Done right, the leveraged buyouts are great cash machines. For one thing, the new owners can begin depreciating their assets all over again, generating enormous tax breaks. Congoleum had sales of more than $1 billion in 1983 and its BIW shipbuilding operation has been notably successful. Still, the company has paid no income taxes since going private, and Radaker says it could pay off half of its remaining debt of about $200 million by 1984 if it chose to (Pauly and Namuth 1984).
companies also can keep the press out of its affairs. Congoleum's Radaker said he once spent 80 percent of his time dealing with investors and regulators. After the company went private, he says, "I had nothing to do" (Pauly and Namuth 1984, 73).

The value of Congoleum's assets jumped from $340 million in 1980 at the time of the private sale to over $1 billion by 1984 according to New England Business (Allen 1985). BIW also has greatly increased the cash flow to its parent Congoleum Corp. Outsiders estimated that BIW earned about 15 percent pre-tax on sales of about $400 million annually for each of the five years between 1979 and 1984 (Frank 1984).

The acquisition of BIW by Congoleum changed many longstanding traditions of paternalism and local control of a relatively small but profitable shipyard. The corporate executives in charge of the shipyard emphasized the need for profitability which would increase shareholders return on equity. In addition, Congoleum's substantial investment in new plant and equipment allowed BIW to remain one of the few remaining shipyards with the technical capability to bid on increasingly large and complex Navy shipbuilding contracts.

Decline in the U.S. Shipbuilding Industry

During the five-year period prior to the summer of 1985, the prospects of the U.S. shipbuilding industry appeared to be mired in a state of continual decline.
Shipyards were forced to close throughout the country, and the industry forecast showed no signs of improvement.

The U.S. shipbuilding industry began sinking faster in 1981 when the Reagan administration ended subsidies to domestic shipyards for construction of commercial ships. Since the subsidies ended, only four large merchant ships have been built in the U.S. Then, as a result of the recession of 1982-83, worldwide oil prices fell and an important component of shipyard construction, offshore oil-rig building, fell flat.

By 1985, U.S. shipyards had been losing ground fast to foreign competition for about a decade, largely because of low labor costs overseas. In 1985, shipyards in Korea were paying wages of about $2.00 an hour, compared with an average of about $12.00 an hour in the U.S. The U.S. Maritime Administration reported that by 1985, shipyards in Japan, Korea, Taiwan, China, and Brazil took up nearly three quarters of the world market and continue to make merchant vessels at prices less than half those charged in the United States (Dupin 1985).

One week into the BIW strike, the New York Times reported that the company believed the stand-off, "reflects new economic conditions squeezing all American shipyards." Furthermore, the article claimed that, "the differences between management and union views of modern realities of American shipbuilding appear serious and deep" (Clendinen 1985, 7).
By 1985, the domestic industry depended on the Navy for about 90 percent of its business, but the Navy did not provide enough work to keep all of the nation's shipyards in operation. Furthermore, four or five shipyards get 70 percent of its business. In the early 1980s, the Navy, under the direction of Secretary of the Navy John Lehman, began to emphasize competitive bidding on new ship contracts. "The Navy has really created an environment where only the strongest and healthiest survive," stated Haggett. (Clendinen 1985, 7). On July 24, 1985, in the middle of the BIW strike, General Dynamics announced that it planned to close its shipyard in Quincy, Massachusetts, the following year and dismiss 4,200 workers (Mohl 1985; McNiff 1985).

The years 1981-1986 witnessed significant changes in the fortunes of American shipyard workers. Between 1981 and 1985, some 25 large U.S. shipyards closed, reducing the industry's total employment by about 15 percent to 106,000 workers, excluding those at yards that do only repair work. The Bureau of Census reported that the total number of shipbuilding and repairing establishments with 20 employees or more peaked in 1982 at 377 firms and decreased by 23.6 percent to 288 firms by 1987. In 1981, the largest number of production workers in the post-W.W.II era, 142,200, were employed in the domestic ship building and repairing industry. With the demise of commercial shipbuilding and the cutbacks in defense spending, the outlook for the industry
had changed drastically by 1985. There was an employment decline among shipbuilding production workers of 44 percent in the 1981-86 time period using a 250-worker minimum-size of firms for both survey years. This decline is contrasted with a 5 percent increase in production workers in the 1976-81 time period. In 1986, nearly three-fifths of the workers were in Atlantic shipyards. The Gulf Coast accounted for one-fifth of the workers; the Pacific Coast, nearly one-sixth; and the Great Lakes, one-twenty-fifth (Bureau of Labor Statistics 1988). 2 "With the Navy's 600-ship fleet largely in place, new shipbuilding contracts have slowed to a trickle, and private yards increasingly are looking to overhaul jobs just to stay afloat" (Carrington 1987, 44).

In sum, the outlook for the U.S. shipbuilding industry was not very promising in the years prior to 1985. Shipyards were being forced to close at an alarming rate and employment levels for production workers was reduced drastically. The end of federal subsidies to maritime construction, the recession of 1982-83, and competition with low labor costs in overseas shipyards all contributed to the

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2 The downward trend in the shipbuilding industry continued in the year after the 1985 BIW settlement. The Maritime Administration's 1987 survey of U.S. shipbuilding and repair facilities reported the closing of five shipyards in 1986, each able to build vessels at least 475 feet long. In 1986, new work won by the industry dropped to about $4 billion, down some $300 million from 1985. Even ship repair and overhaul work is in retreat. The Navy, which once employed private shipyards to do most of such work, increasingly uses government owned yards to save money (Payne 1987). In the year ending September 30, 1986, Navy shipyards won overhaul contracts valued at $362 million, nearly six times the $63 million the private yards won (Carrington 1987).
demise of U.S. commercial vessel construction. The vast majority of new ship construction was limited to military and Coast Guard vessels. The bidding process for military contracts became more competitive and overhaul work increasingly was awarded to federal shipyards. More importantly for the unions, beginning at Ingalls Shipbuilding in the fall of 1983, lower labor costs became a basis on which to compete for the few remaining new construction contracts.

**Competition for Navy Contracts**

BIW specializes in building destroyers, frigates and cruisers and other relatively small, fast warships. The Navy is in the process of seeking bids on the Aegis combat system, the linchpin of Navy Secretary John Lehman's planned 600 ship navy. Three shipyards emerged as the main bidders for these ships: BIW, Todd and Ingalls. Competition has been especially fierce because the shipyard that wins the bidding for the first of a new class of ships usually gets the large share of subsequent orders for the same ship (Stipp 1985). After renegotiating its labor contract early in September 1983, Ingalls shipyard in Pascagoula, Mississippi underbid BIW by $93 million on the two lead Aegis cruisers.

With as many as 60 Aegis destroyers with a total price tag of up to $56 billion scheduled to be built by the turn of the century, BIW calls the Aegis "the last major surface combatant plan on the table." But the Aegis system is also
the largest defense system ever devised by the Navy. With such high stakes on the table, the three main competitors lobbied vigorously to land the lead contract for the DDG-51 destroyer. Todd Chairman John T. Gilbride told legislators on capitol hill that if it did not get the lead destroyer contract, "the Navy will lose its only remaining West Coast surface combatant shipbuilder." In the eighteen-month period prior to November, 1985, Todd cut its $13.50 an hour work force in Los Angeles by 40 percent to 3,000 and continued to lay off 250 workers a month (Cutaia and Payne 1985, 96).

Factors such as a loyal work force and quality products came into play on April 2, 1985 when BIW was awarded a $322 million contract to build the lead ship in the DDG-51 class destroyer, the USS Arleigh Burke. BIW also has contracts to build four remaining guided missile frigates and four CG-47 cruisers. The guided missile frigate contracts have proved very profitable for BIW. In bidding on three of the frigates in 1980, BIW said it could build each one for $72 million, including $10 million or 14 percent profit. BIW actually built each ship for $62 million and for coming in under budget, the Navy gave BIW $3 million per ship in bonus money. This amounted to a total of $13 million on $62 million--a 21 percent return on each ship. And this is not including "change orders," cost change allowances if the price of labor or materials goes up during construction, nor a "quality bonus" the Navy gives for good work (Allen 1985).
Lt. Max Allen of the Navy says a "fixed price contract" means neither the Navy nor the shipyard can make mid-construction design changes without high-level Navy approval. But contractors still will be reimbursed for cost changes. Lt. Allen also says that under BIW's destroyer contract, the Navy increased its incentive payments for finishing work under time and under budget from 34 percent of the saving to 50 percent (Allen 1985).

Summarizing corporate history, it can be said that BIW consistently has delivered ships ahead of schedule and under cost, due in large part to a loyal and hard-working work force. The shipbuilding industry is in a general state of decline, and competition over Navy contracts continues to be intense, especially with regard to the lucrative Aegis combat system. It appears that much of the competition between shipyards will be fought over the issue of who can win the biggest concessions from labor at their respective shipyards.

**Labor Management Relations**

A longstanding tradition at BIW is for management to assume a paternalistic attitude toward its work force. In the 1930s as the depression deepened and other firms began imposing wage cuts on their hourly employees, BIW President Pete Newell responded:
We have no intention of reducing wages at the Bath Iron Works. I believe it wrong to cut wages in a period like this. We can't get production when that is done and it isn't fair for us to expect it (Bath Independent, May 7, 1931).

In the late thirties, the Congress of Industrial Organizations failed in three attempts to organize the workers at BIW. However, the W.W.II war effort brought new promise to labor organizing and the production workers voted in 1941 to be represented by the Independent Brotherhood of Shipyard Workers. The choice of BIW workers for an independent union over national organization is a testament to the tradition-ally independent nature of the typical Bath shipbuilder. Competition among the independent union, the AF of L and the CIO between 1940 and 1944 was fought over the right to represent workers in the shipyard.

During W.W.II, in the spirit of increasing production for the war effort, a Labor-Management Committee was also established to speed production, build morale, encourage suggestions, secure action on workable ideas, and further interdepartmental cooperation. The relationship between management and labor remained friendly and stable throughout the war period with hours lost to work stoppages being among the lowest in the entire shipbuilding industry (Snow 1987). Even though the National Labor Relations Board supervised four bargaining elections during this period, the independent union maintained control and continued to represent production workers for several years after the war.
In the mid 1950s, labor management relations in the shipyard evolved to a confrontation which was to serve as a model for the 1985 labor dispute. A strike was narrowly averted in 1953, after the union voted overwhelmingly to reject the company's first offer, until management "sweetened" the pot with several concessions. But in general, since W.W.II, the union membership "was frequently more conservative, willing to accept the company's assessment of what it could afford, than the leadership it elected from its own ranks" (Snow 1987, 459). For example, in 1956, BIW workers voted overwhelmingly to accept a company offer of a 6 percent wage increase against the recommendations of its own bargaining committee and the union's national leadership who were seeking an 8 percent increase. The national union refused to sign the new contract or even be present when it was signed. In this case, the rank-and-file were willing to accept lower wage increases partly as a result of company claims of heightened competition and a verbal assurance from management that the company would pay annual bonuses to its hourly employees when it did better on future contracts (Snow 1987).

The following year brought a major confrontation between the union and its national leadership and the company, resulting in a bitter and confusing strike. Backed by the leadership of the AFL-CIO, the leadership of Local 6, International Union of Marine and Shipyards Workers, called for a
strike after failing to get the company to grant wage parity to BIW workers with other East Coast shipyards.

There followed a battle between the union leadership and the BIW management, fought in the press through letters and full-page ads. These bargaining tactics were to be repeated during the 1985 labor dispute, and the arguments on both sides made in 1957 would be heard again nearly three decades later. The company argued that shipyard employees already enjoyed a substantial increase in real wages since 1950 and that demands for parity with the wage scales at Bethlehem-Quincy were unrealistic because that shipyard was in severe financial difficulties because it was no longer price-competitive with other shipyards. The union's response was to claim that the issue of competition "was not germane because the shipyard had been posting healthy annual gains in its net profits for the previous six years" (Snow 1987, 460).

A situation developed during the ensuing strike that was to serve as an early warning to the union leadership in the 1985 dispute. When the Local 6 executive and negotiating committee made the claim that they hadn't yet received the company's "last" offer and refused to come off strike, the company responded by announcing that it would be open for anyone prepared to cross the picket lines. Within a few days, the number of workers crossing the picket lines increased to more than 700; the picket lines were withdrawn, and 1,575 men reported to work without a contract.
The late 1970s saw significant changes in the labor force in the shipyard and changes in the labor-management environment. From the time Radaker and Nicholson joined Congoleum in 1975 until 1982, the work force increased 136 percent to more than 8,500 men and women. The influx of new workers had a significant impact on the relationship between management and labor in the shipyard. The work force was no longer a senior, homogeneous work force on a first name basis with management. The average employee age dropped seven years between 1975-1982. Snow (1987) observes,

The newer employees did not altogether share the deeply ingrained sense of loyalty or family tradition which was the hallmark of the shipyard when its employees were drawn primarily from Bath and its immediate environs and operation of the plant was clearly vested in the hands of local people (560).

During the years 1975-81, the relations between the union and management appeared to improve following the troubled period of the late 1960s and early 1970s. True, Local 6 of the Shipbuilders called a strike after failing to reach an agreement with management on a new contract in 1976. But that strike was settled within three weeks after the company reshuffled the original offer, advancing some of the increases but retaining the same package price tag.

The keys to this moderately long period of peaceful coexistence between management and labor were threefold. First, the shipyard enjoyed a growing backlog, skyrocketing profits, and record-high peacetime employment. Second, BIW President John Sullivan also "believed in the importance of
worker morale and assiduously cultivated it at every opportunity by stressing the critical role the production workers played in BIW's not inconsiderable achievements" (Snow 1987, 560).

Third, the company made two relatively "generous" contract settlement offers in 1979 and 1982. When the company submitted its proposal to the union negotiators in 1979, the proposed package included a large, across-the-board $2.12 wage increase over three years, improved insurance and retirement benefits, and an immediate one-week paid vacation upon accepting the company offer. There was no contest, 96.4 percent of the union membership voting on the contract said "yes" (Portland Press Herald, July 2, 1979).

Prior to the 1982 negotiations, the company was enjoying the prosperity of the frigate program, and the negotiated offer reflected that prosperity. Pay increases averaging 28 percent over three years, totaling $2.50, increases for all types of premium work, and improved benefits made up the package that went to the union rank-and-file for discussion and a vote. Once again it was approved, but the margin was a lot less one-sided. Nonetheless, BIW's shipbuilders now emerged with a pay scale equal to or superior to East and Gulf Coast shipbuilders and only slightly behind the West Coast pay rates (Snow 1987). It is clear that prior to the 1985 contract talks, production workers had become accustomed to a decade of harmonious labor-management relations
which saw substantial increases in pay and benefits negotiated in a period of company profitability and high worker morale.

In sum, when the social and historical conditions underlying bargaining are reviewed, a dynamic picture emerges which includes many significant changes in the company, in its relationship with the union, and in the overall bargaining environment. The company was involved in a leveraged buyout by private investors whose eventual profits depended to a large extent on securing reductions in labor costs. Labor-management relations in the shipyard were headed toward a state of flux as the era of "generous" contracts was about to end at BIW. The union experienced a leadership change just prior to the beginning of contract talks. The bargaining environment was not favorable to organized labor, especially in a declining industry which was experiencing increased competition for Navy contracts. In short, from the standpoint of both the company and the union, the situation leading into the 1985 contract negotiations was far from stable and as a result, the outcome of the bargaining process was certainly not pre-determined.
CHAPTER VI

DETERMINING THE BALANCE OF BARGAINING POWER

Introduction

This chapter will address the complex issue of how bargaining power contributed to the determination of the contract settlement at BIW in the summer of 1985.

When analyzing the critical aspects of a case study of collective bargaining, the focus turns to the issue of bargaining power. This power aspect of labor relations is fundamental and inescapable because in essence, collective bargaining is a power relationship. According to Leap and Grigsby (1986),

The concept of bargaining power has received only cursory treatment in the industrial relations literature when compared to other facets of collective bargaining. Yet most industrial relations scholars would agree that bargaining power is a crucial aspect of collective negotiations (202).

The usual scenario for U.S. labor negotiations is an adversarial relationship in which the union attempts to maximize its members' pay and benefit package while management is interested in obtaining a low-cost labor contract. The balance of bargaining power between labor and management determines the outcome of contract negotiation. The parties' knowledge of labor market conditions may set the bounds on the settlement, but bargaining power determines
the position of the settlement along the range of possible outcomes.

In order to help the reader progress through a complex series of events which led to the 1985 labor settlement, the following strike chronology and list of participants are provided. For a more thorough account of events preceding the settlement as related by the participants, see Appendix A.

**Strike Chronology**

October, 1984 - BIW tries for the fourth and last time to settle the contract early. The union rejects a 30-cents-an-hour wage hike over two years and two lump sum bonuses of $500.00

Spring, 1985 - Congoleum's team takes over direct control of negotiations.

May, 1985 - BIW proposes a wage cut later changed to a wage freeze, a permanent two tier wage at $3.00 less-than-current pay, a change in health benefits to a Comprehensive Care plan with a $1,500 deductible for families.

Union wanted an 8 percent pay hike later reduced to a 4 percent increase, with no changes in pay scale or health benefits.

June 29, 1985 - Production at BIW comes to a virtual halt when a high rate of absenteeism forces the company to send workers home as their contract expires.

June 30, 1985 - Following a raucous, half-hour meeting at the Augusta Civic Center, 4,500 BIW shipbuilders vote overwhelmingly to go on strike.

July 1, 1985 - Strikers set up round-the-clock picket lines.

July 5, 1985 - BIW President William Haggett rejects the union's challenge for a public debate on the strike issues.

July 17, 1985 - At the urging of federal mediator William J. McGonagle, the two sides meet for two hours of talks, but no progress is reported.
July 25, 1985 - The union releases copies of BIW's contracts with the Navy showing the company will make at least $80 million in profit from the construction of three ships.

July 28, 1985 - A crowd estimated at between 800 and 1,000 people rallies in downtown Bath in support of the striking workers.

August 2, 1985 - BIW files suit against the union and its lawyers charging them with releasing "extremely sensitive and highly confidential" information concerning Navy contracts.

August 13, 1985 - No progress is made during a negotiating session and two other meetings are cancelled.

August 16, 1985 - For the first time in 15 years, BIW misses a Navy ship delivery deadline.

August 24, 1985 - A Navy commander testifies in court that BIW President Haggett tried to get him fired after he downplayed the significance of a document that was released to union officials by the Navy.

August 29, 1985 - BIW reaches a tentative contract with the 400-member craftsmen's union.

September 3, 1985 - Gov. Joseph E. Brennan says he may intervene in the strike if the two sides do not reach accord shortly.

September 11, 1985 - Nothing comes out of an all-day meeting between the company and union negotiators.

September 17, 1985 - A tentative settlement is reached between BIW and 370 clerical workers who have been striking since April 21, the longest strike in the shipyard's history.

September 22, 1985 - The union and the company exchange barbs in newspaper advertisements. Haggett vows to open the gates to workers who want to return if the strike is not settled within two weeks.

September 30, 1985 - BIW President Haggett attends as the two sides meet for 5 1/2 hours but no results are announced.

October 2, 1985 - Following a 20-hour marathon negotiating session, the two sides reach a tentative accord.

October 7, 1985 - Membership of Local 6 ratified the agreement by voting at the Augusta Civic Center.
A review of the interview data indicated several factors as having been crucial to the balance of bargaining power in the 1985 BIW negotiations: (1) personnel and structure of the bargaining teams, (2) timing, (3) access to data, (4) tactics and strategies employed, (5) informal meetings, and (6) outside forces.

**The Bargaining Teams**

Brown (1983) warns that conflict among organizations sometimes escalates into bitter antagonisms and inter-organizational warfare. He further claims that, "issues at organizational interfaces can threaten the autonomy and survival of one or both parties, so disagreements may pack a lot of weight" (221). In the case of the BIW labor dispute, internal conflict, disagreements on goals, and personality disputes on both bargaining teams had a significant impact on the final settlement.

**Company Team**

The personnel on the company team were separated into two factions: (1) those identifying their interests with the shipyard and the Bath community, and (2) those who were protecting the interests of Congoleum Corporation. The local BIW faction was headed by the president and CEO, William Haggett. For the vast majority of the negotiating period, Haggett worked behind the scenes with the company team, and did not take a leadership role until the last two days. Haggett's attempt to distance himself from the
negotiations did not work. Fourteen weeks into the strike, repeated attempts to resume meaningful negotiation all had ended in failure. Haggett came to believe that it was worth a try for him to go to the negotiations, regardless of the risk. When asked about the risk, Haggett explained that "a CEO is expected to deal on the spot." He felt that in this case, the risk was acceptable because the issues had been well studied and he felt comfortable at the table having been involved directly in previous negotiations (Haggett 1988).

Having been brought up in Bath, Maine, and having his father and grandfather work in the shipyard, Haggett had some sympathy toward the workers in the shipyard. Congoleum people saw this as a personal weakness and were afraid that if Haggett were given a free hand in negotiations, he would not drive nearly as tough a bargain as what they desired. As evidence, they pointed to the liberal offer in the mid-contract talks when he had control over the negotiation (Duvin 1988).

It is clear that a certain animosity developed between the Bath people on the management team and the "outsiders" brought in by Congoleum Corporation. The Director of Labor Relations, Steve Wilson felt the attitude of the officers of Congoleum toward Bath people and their ostentatious show of wealth by Maine standards was not necessary and did not help matters. He also indicated that there was bad chemistry between V.P. Ronald Bancroft and CEO William Haggett (Wilson
1988). Bancroft was viewed by many observers as Congoleum's hand-picked successor to Haggett. Duvin claimed that, "it was a war between the Congoleum people and Haggett all the time. Haggett had one point of view and we had the other" (Duvin 1988). It was difficult to get a consensus position, but when it came to the bottom line, Congoleum, the owners of BIW, usually got their way. Duvin's response to being labeled as an outsider was, "there is no geography in this business" (Duvin 1988).

The other prominent BIW figure on the management team was the Director of Labor Relations, Steve Wilson. He was the chief negotiator on the previous two contracts, but he functioned in a lesser role in the 1985 negotiations. The labor relations office in most firms functions to bridge the gap between the desires of management and the concerns of the employees. Congoleum's strategy to exercise control over a boundary organization such as the labor relations office is described by Morgan (1986) as a source of power in an organization. Boundary-spanning departments are caught between two worlds. Influencing representatives of other organizations calls for skills in negotiation, political tactics, and informal influence strategies. Furthermore, "effective representatives develop considerable informal power within their own organizations if important stakes are invested at their interface" (Brown 1983, 218).

As an experienced negotiator and labor specialist, Wilson provided strong support for the inexperienced Ronald
Bancroft, whom Congoleum had installed as chief negotiator. Wilson immersed himself in the staff work, preparing positions and analyzing data on comparative wages. Wilson was very dedicated to his job and he spent many extra hours at work because he seemed to truly like negotiating. He was also particularly adept at the fine nuances of contract language. Wilson was very careful about taking accurate notes of any negotiating sessions—notes that later would be interpreted in favor of the company if there was a dispute or discrepancy (J. Finn 1988). These tactics are described by Morgan (1986) as the use of rules and regulations which provide a source of power in organizations.

Congoleum named Ronald Bancroft as chief negotiator for the management team even though he had limited negotiating experience. Bancroft, a graduate of the U.S. Naval Academy and a Rhodes Scholar, is a very intelligent and thoughtful person, but his reasoned approach proved to be inappropriate for the rough-and-tumble atmosphere of the 1985 BIW contract talks. His role was widely misunderstood by the union. He was viewed as being "the Congoleum puppet" (Ladd 1988) brought in for the purpose of union busting, when in fact, he was considered a moderate on the management team¹ (Duvin 1988). Bancroft's ineffectiveness was partly the result of the lack of what Morgan (1986) terms "the power one already

¹ Congoleum also brought in a finance specialist, Terry Morton from Portsmouth, N.H., who was reported to have hard line views on labor relations, but did not have much influence on the team (Bancroft 1988).
has." Bancroft's lack of personal power led to his eventual separation from the company the next year.

Some members of the union negotiating committee viewed Bancroft as someone brought in only to sell the company insurance plan. He was seen as not being a very competent labor negotiator. In the estimation of the national union president, "Bancroft was thoroughly unknowledgeable about negotiation" (Batson 1988). In fact, some members of the committee made a game of antagonizing him. Union negotiators claimed that he could be intimidated by name calling (C. Finn 1988). They did not relate well to him because of what they perceived as his "Annapolis Syndrome"—enlisted men versus the officers (J. Finn 1988). Having been brought into BIW by Congoleum as a V.P. and potential successor to Haggett, it appeared that he had difficulties relating to production workers as equals across a bargaining table.

The chief spokesman and the key to the management team was the Cleveland labor lawyer, Robert Duvin. Brought in by Congoleum to secure a concessionary contract, Duvin was a veteran of many concessionary bargaining sessions and highly respected in business circles as one of the best labor lawyers in the country (Sabath 1986). His list of management clients includes such prominent figures as H. Ross Perot of Electronic Data Systems (Wilson 1988).

Duvin obviously was not local and his tough style did not endear him to other management team members. However,
all of the management team recognized that he was an experienced and brilliant negotiator who not only read people well but also could read how a particular negotiation was developing. He was the person on the management team responsible for developing the strategy necessary to accomplish the goals of Congoleum Corporation. No matter how much BIW people resented Congoleum's interference, it was always clear that Duvin "called the shots" for the management team. The domination of the parent corporation is evidence of Morgan's (1986) power in organizations derived from the formal authority that comes with ownership.

Duvin saw himself as a "paid soldier" brought in to do a job that the local management team were either unwilling or unable to do. He clearly understood that he was working directly for Congoleum Corporation and that he would wage war with the union in order to serve his client's interest (Duvin 1988). Duvin was a professional negotiator hired to do the unpleasant job of securing concessions from a union which had grown accustomed to substantial wage increases. Members of the union negotiating committee understood Duvin's role and there was a genuine respect for his skills as a negotiator and even some measure of "good feeling" about him personally. However, one member of the union committee expressed the opinion that Duvin was not a good negotiator, He stated, "It's easy to negotiate when you have Congoleum behind you. He just gave the company
position and stood firm . . . that is not negotiating" (Ventry 1989).

The one absent member of the management team who directed the company effort was the CEO and owner of Congoleum Corporation, Eddy Nicholson. Nicholson was kept abreast of all developments and spoke to Haggett on a daily basis. There were four strategy sessions with Nicholson prior to the negotiation and one review of progress during the negotiation. Vice President Bancroft described Nicholson as someone who "was not afraid to dig in, one tough cookie" (Bancroft 1988). In Duvin's estimation, Nicholson was "a tough, hard-nosed corporate executive . . . who was prepared to deal with the war" (Duvin 1988). It is also important to note that Duvin took exception to characterizing Congoleum as an outside force in the negotiations:

Eddy Nicholson was the goddamn owner of the company not an outsider. The president of GM doesn't sit at the negotiating table. BIW, as much as they didn't like it, was not part of Maine. It was a part of Congoleum! (Duvin 1988).

The key to understanding the effectiveness of the management team is to realize that even though he was not at the table, Nicholson was directing the negotiating. Pfeffer and Salancik (1978) claim that when the administrator really does make a difference and really does affect organizational performance, his effect will be obvious to all and there will be little need to make a show of power and control. Nicholson's goal was to lower average wages in the shipyard. His hand-picked negotiator, Robert Duvin, "always knew the
bottom line" (Johnson 1988). Regardless of the diversity of opinion on the management team, Nicholson took control of the situation so that there was one clear and unified strategy. This behavior is consistent with Morgan's (1986) identification of control of decision processes as a source of power in organizations. Congoleum assumed control of the three elements of the decision process: (1) the premises or agenda of the team in pre-negotiation strategy sessions, (2) the processes of how, who and when decisions were made through Duvin's influence, and (3) the issues and objectives to be addressed by excluding CEO Haggett and marginalizing the other company negotiators. In the final analysis, Congoleum's position of corporate ownership ensured that they would dictate affairs on the management team.

A number of Morgan's (1986) sources of power are evident in the management negotiating team. The careful structure of the team reinforced their position. Congoleum officials exercised bureaucratic authority over the team by virtue of their corporate ownership, the personal power they already had, and by controlling the decision process. In addition, Congoleum insured that they would maintain control of this important boundary organization by having their labor attorney be their presence in the negotiations.

Union Committee

The union negotiating committee was ineffective in reaching its limited negotiating goals for several reasons: (1) lack of a effective structure, (2) bad personal
dynamics, (3) lack of local leadership, and (4) limited role for the national union.

First, the union was hampered throughout the negotiation by lack of an effective organizational structure for their negotiating committee. Having a committee consisting of an even number of members made for a potential deadlock on each crucial decision. One-half the committee were members because they were already officers or past officers in the union. Being an elected union official is no real criteria for participating in the negotiation of a labor contract. Being an effective negotiator comes with bargaining skills and experience. The other half of the committee were elected to their position by the rank-and-file. Being popular in the shipyard or being outspoken about one's dislike for the way BIW seemed to be treating workers was not a good test for whether a person could effectively function on a negotiating committee. "Shipbuilders are not professional negotiators. This is a popularity contest. We had no training" (Ward 1988). One member asked, "How do you elect people who can deal with company professionals and also communicate with the rank and file?" (J. Finn 1988). The result of this selection process was to have a committee made up of members who were for the most part very inexperienced in labor negotiation. The lack of personal power is identified by Morgan (1986) as a source of a party's ineffectiveness. Members of the union negotiating committee simply did not possess the personal power that would have
enabled them to be effective against such a hard line company stance.

The union's democratic process may inhibit the selection of the most skilled negotiators. The rank-and-file is unforgiving of unsuccessful negotiators and not one member of the 1985 negotiating committee was re-elected to serve on the 1988 committee. The process itself virtually insures that experienced professional company negotiators will always be facing a union committee with little knowledge or experience in negotiation.

Second, bad dynamics developed between members of the committee. The federal mediator identified at least four factions on the committee and there was very little agreement on important issues such as negotiating goals, tactics and strategies (McConagle 1988). An abundance of hard feelings on the union committee resulted in some members automatically opposing any initiative of certain members of the committee. The union president indicated that, "the biggest battles were amongst ourselves and with the national president" (Ladd 1989). There simply were not enough formal authority, organizational structure, rules and regulations, and personal power on the union committee to make it effective.

The more hard-line members of the committee opposed all attempts to reach an agreement by any means other than a strike designed to force BIW to modify its stance. These members were seen by other committee members as unrealistic
in their demands and expectations. Some militants also were talking to other unions about breaking away from the national union and refused to deal with its president, Arthur Batson. He would have preferred that the committee work in a different direction since, as it was, "some members would not listen to reason" (Batson 1988).

One thing that particularly incensed Batson was that out of a committee of eight members, only three members were doing any work. Batson stated that, "The committee didn't get the idea that you're elected to do something." The militant response was "Batson is a good talker, but when push comes to shove, he gets shoved" (Meader 1988). As the negotiations progressed, no one member of the union committee possessed decision-making power.

In addition to preventing the committee from employing a unified strategy to achieve a common goal, the bad dynamics on the committee gave the labor lawyer, Duvin, the perfect opportunity to utilize "divide and conquer" tactics. Duvin knew which members could be persuaded, and he did not waste time and effort with the hard core militants on the committee (Meader 1988).

Third, the union lacked solid local leadership which could have overcome the dissension on the committee. The local president was inexperienced in his job as the chief official for the union and he was also a complete novice in labor negotiation. It was detrimental to the union that a person as insecure in his position as local president could
be automatically tapped as chief negotiator. In Morgan's terms, the personal power that he brought to the committee was decidedly lacking.

It became clear to other members that the local president did not have much of an idea of what the committee was to accomplish or for that matter any idea of how to go about it. In addition, Ladd was impulsive and impatient and his style ruined several possible compromises. One union committee member explained that the company would be in the middle of explaining their proposal on insurance and before we even got to ask questions, Ladd would jump up and announce, "I've had enough!" and walk out (Ventry 1989). He did not possess strong organizational skills and did not document anything. He was described by another union committee member as a "blood and guts" man with no planning ability or direction. Given the divisive nature of the union committee, the local president needed to be cool under fire and focused on what was best for the union. The labor relations office saw the problem as having too many type-A personalities in the room. In the opinion of the director of labor relations, "Ray Ladd was fuze oriented .... it took tough on tough to deal with him" (Wilson 1988).

Unfortunately for the union, Ladd was not able to function effectively in his role as chief negotiator for the union committee. The one member of the committee who could have provided the local leadership was the chief steward at Bath and benefits/food coordinator, Scott Johnson. Because
he did not feel the timing was right, Johnson did not step forward to assume control. Instead, he spent his time advising the local president.

Fourth, the key component of the union committee was the limited role played by the president of the national union, Arthur Batson. Hagget believed Batson should have been stronger in providing leadership for the local president and his inexperienced team (Haggett 1988). Batson had many years of experience negotiating contracts throughout the country. The federal mediator assessed Batson as, "an extremely astute and capable bargainer" (McGonagle 1988). One committee member observed that the national union "became the gel and provided an objective viewpoint" (Johnson 1988). Batson realized before the talks began that the company could not be easily negotiated out of their position.

Batson played a lesser role than in the previous three negotiations at BIW because of the make-up of the committee. He intentionally backed off when the dissident radical group started animosity within the committee. His philosophy was to give the locals a great amount of autonomy. Batson only became fully engaged toward the end of negotiations, especially the last two nights. He felt that, "the situation required a waiting out period" (Batson 1988). The union cause was seriously impaired by his absence because he was the one member who could have provided a foil to Duvin and countered his power.
Batson's potential importance to the success of the union committee was not lost on the company's labor lawyer, Robert Duvin. In fact, prior to the start of negotiations, Duvin paid a visit to Batson in Washington, D.C. and made threats. Duvin predicted at least a four-month strike. Batson responded, "If that is what it takes!" (Batson 1988). It is of interest to note that Duvin thought that Batson demonstrated a very difficult, abrasive and ineffective personality (Duvin 1988). One union committee member recalled Batson as not being very professional or very impressive in negotiations. He did not act in a manner that would lead to agreement. In his words, "Batson only sat and called Duvin names to antagonize him" (Ventry 1989). However, in Duvin's estimation, personalities did not make a substantive difference because whatever he could say bad about Batson, could be negated by whatever Batson could say was bad about Duvin. In fact in Duvin's view, "all personalities were irrelevant" (Duvin 1988). It is also revealing that a hard line member of the union committee also expressed the opinion that, "personalities didn't matter, it was the issues that counted" (Meader 1988). The implications of this are that the bargaining tactics of intimidation or friendliness, or some combination of the two had very little bearing on the 1985 negotiations.

Whether Batson's role was diminished because of maneuvering by company negotiators or by the internal dissention within the committee, it was a key factor in having
the strike last as long as it did. With weak local leadership and a disengaged national president, the committee was in serious need of direction and the rank-and-file became disenchanted with the strike as the weeks passed by.

On the one hand we see a company team, well organized and specifically structured to present a hard line and committed position. A unified stance was adopted which reflected the aims of the CEO of the parent corporation. Experienced negotiators replaced members of the team who were potential soft liners and the full force of corporate power was brought to bear on the negotiations. This may be compared to the weak structure, internal conflict, lack of direction and personal power on the union committee. There was a decided imbalance of power along a number of subjective dimensions of power in organizations which had a significant impact on the outcome of negotiations.

Timing

Given his many years as a federal mediator, William McGonagle believed that the 1985 BIW settlement was a prime example of the importance of timing in contract bargaining. McGonagle believed that timing played an essential role in the determination of the balance of bargaining power between the two parties. Because he saw that the timing of the contracts favored the company in 1985, the McGonagle warned the union against going on strike. His recommendation was to work and continue to bargain (McGonagle 1988). Business
Week observed in May, 1985 that, "Bath's leverage in bargaining may have been strengthened by a recent announcement that it will lay off about 1,000 of its 7,400 workers when its frigate program winds down at the end of the year" (Buell and Payne 1985, 90).

The shipyard already had been awarded the contract to build the lead ship in the new class of Aegis Destroyer. The Wall Street Journal reported in late September, 1985 that although the shipyard missed in-house deadlines on two Navy ships it was building, it was under little pressure to settle quickly ("BIW Misses" 1985, 1). Because the shipyard was ahead of schedule on its frigate production work when the strike began, it wasn't likely to need contract extensions unless the strike lasted well into the next year. The Navy typically grants penalty-free extensions to its contractors when their workers are on strike to avoid influencing labor disputes (Holmes 1985). However, in this instance, the Navy's refusal to become involved in the labor dispute was a form of influence that favored the company's position.

Ironically, one of the reasons for the lack of production work in the yard was all the overtime taken prior to the strike to build up each member's cash reserve. A committee member pointed out, "that worked against us because there was very little work to be done during the strike period" (Ventry 1989). Moreover, settling early with the draftsmen enabled the shipyard to stay on schedule in
designing the Navy's new Aegis destroyer. Captain Edward Webster, commanding officer of the Navy office at BIW said "within the federal acquisition regulations, there are allowances for delivery adjustments as a result of work stoppages" (Holmes 1985a, 1). The union calculated the weekly payroll at BIW during the period they were on strike in order to determine how much Congoleum was saving. The company's benefiting from the strike was seen by the union committee as another example of "Congoleum raping BIW for everything it could get" (J. Finn, 1988). This also reflects where the bargaining power lay as control over timing and resources rested with the company.

Theories of leverage in collective bargaining usually define a strike and the threat of a strike as labor's bottom line weapon of withholding labor services in order to inflict financial penalty on the company. For example, Herman, Kuhn and Seeber (1987) argue that, "under the conventional concepts of management rights, organized employees, unless they are prepared to strike, have very little bargaining power" (246).

In the case of BIW, the company not only avoided financial penalty, but may have actually saved money by not being required to pay production workers in the slack period between major Navy contracts. Under these circumstances, the potential existed for the strike becoming a management weapon, and thus revealing another aspect of their power.
Duvin also realized that the economics of the defense industry provided BIW with a certain amount of built-in leverage at the table. He indicated that the Navy awarded money to contractors on a prorated basis over time, so that even if the shipyard was not in operation, the shipyard was not suffering economic loss (Duvin 1988). The crucial issue facing union officials and the rank-and-file was the effectiveness of the strike. Was the company being financially penalized during the work stoppage? It seems that the only parties to suffer a financial loss as a result of the strike were the striking union members and the national union. This is an illustration of how economic factors as seen in the costs incurred by each party affect the balance of bargaining power.

Once the parties had reached an impasse, the issue of when and under what circumstance to resume talks became an important strategic decision. Knowing when to resume talks and when to settle are important strategic decisions that can greatly enhance the bargaining power of either party. On the management side, Robert Duvin's bargaining experience provided him with the knowledge of how to keep up the pressure, and when to return to the table. Going back to the table early can produce disastrous results because the process only raises expectations. Management's ability to control the timing of contract talks was a luxury brought on by the economics of the defense industry.
The federal mediator saw his role in the dispute as at least trying to keep the sides talking to each other. McGonagle called for meetings so that it would not show weakness from either side. However, the union was unhappy that meetings were called and indicated that nothing could get resolved. When calling for a meeting, McGonagle stated, "I was walking on extremely thin ice. I couldn't speak too long with one side. It was all nuances" (McGonagle 1988). There was always a new complaint when the parties met. The union members would ask, "Why are we here? Who called the meeting? If there is no change in the company offer, there is no point in staying" (McGonagle 1988).

In addition, the key spokesman on the management team, Duvin was in and out of negotiations as he travelled back and forth to Cleveland. There was no early indication by either party of a willingness to settle the contract. The failure of the parties to come to an early settlement only reinforced management's bargaining power since the cost of disagreeing was born primarily by the union side during the strike.

In the middle of the strike, another change at the federal level increased the pressure on the union to grant concessions. On August 1, 1985, a compromise in the new federal budget proposal effectively intensified the rivalry between competing shipyards. The new budget reduced the allotment for the three Aegis cruisers from $3.1 billion to $2.79 billion. With BIW in the middle of a strike over
concessions, the Navy admitted it was taking advantage of its position. "Let's face it, it's bargain time" a Navy official said to the Portland Telegram. A Navy shipbuilding monitor at headquarters in Washington, D.C. explained, "It's a captive labor force. The people in Maine don't have much choice. Either they build ships or they pick worms," (Frank 1984, 58). This is an example of external factors affecting bargaining and "because of the increased inter-connectedness of organizations, interorganizational effects are mediated more by regulation and political negotiation than by impersonal market forces" (Pfeffer and Salancik 1978, 94). In this instance, the Navy's budget reduction only served to strengthen the company's position by reinforcing its argument concerning the increased competition in the shipbuilding industry.

Clearly, then, in the BIW labor dispute, timing played a crucial role in the determination of the contract agreement. The economics of defense contracting provided the company with an intrinsic amount of bargaining power. Because the strike occurred during a slack period in the shipyard's production, the short-term effect was to harm the union more than the company. As the strike dragged on into its fourth month, the costs to the union increased substantially, while the costs to the company were not nearly as devastating. Due to the influence of outside factors, the company's bargaining cost ratio may have actually improved during the strike. However, for the union, the costs of
disagreeing with the company's terms began to exceed the costs of agreeing. When this occurs, there usually is a great deal of pressure applied to the negotiating committee to bring the company offer to a vote of the total membership. Such was the case in the lengthy BIW strike.

Access to Company Cost Data

The issue of union access to company cost data became a major source of contention between labor and management negotiators during the 1985 labor dispute at BIW. The union felt that the data were important to establish the extent of expected company profits on future Navy contracts. The company, being a privately held corporation, maintained that they were under no obligation to share sensitive cost data with anyone.

One of the sources of power in organizations described by Morgan (1986) is control of knowledge and information. In the BIW labor dispute, control over information played a prominent role in the determination of bargaining power during contract negotiations. The company's refusal to grant the union total access to the company cost data contributed significantly to the imbalance of power in favor of the company.

Company Data

Prior to the start of negotiations, BIW's management team took a survey of wages and fringe benefits at all large shipyards and since they normally exchange wage data with
other firms, they had copies of other shipyard labor contracts. Haggett felt that BIW needed to be in the upper one-half or one-quarter of shipyards, but not the highest paid (Haggett 1988).

The company had experience with the building of frigates and had already started on the Aegis cruiser. BIW also knew Ingalls' actual costs on the Aegis cruiser program. The company analyzed costs and factors which impacted on costs and tried to achieve equality with Ingalls' total labor cost package. Vice President Bancroft stated,

BIW employed experience curve analysis combined with a knowledge of how BIW builds versus how Ingalls builds. The result was a difficult and extensive analysis on competitive pricing on the Aegis program. This study indicated the importance of getting a good labor settlement (Bancroft 1988).

BIW clearly saw itself as a wage leader in the shipbuilding industry. The comparative cost data studied by the company indicated that its total wage package was too high and it was time to cease being the high wage leader. The only way for the company to remedy the situation was to obtain a concessionary labor contract from the union in 1985.

Union Data

Before the start of negotiations, the committee looked at labor contracts with other competing shipyards, with Maine paper mills, and with steel mills. The focus, however, was on other contracts in shipbuilding. Close
attention was paid to the wage and benefit package at BIW's main competitor, Ingalls Shipyard. The national union also helped to provide data from contracts negotiated by other locals at Bethlehem Steel, Todd Shipyards and Quincy Shipbuilding. One committee member indicated that they, "looked at wages, bonuses and incentives for other shipyards and tried to translate those rates to compare their contracts with ours. Adjusting for incentive pay was very difficult" (Ventry 1989). Shipyard workers were not prepared to complete the task of analyzing all the cost data. As one team member correctly observed, "We are not graduates of Harvard Business School" (J. Finn 1988). These statements reveal how the imbalance in managerial skills impacted upon bargaining power to the disadvantage of the union effort.

Compounding this, the union committee was at a disadvantage with regard to the use of comparative wage data. Wages at BIW were high relative to manufacturing wages in Maine. In 1984, the average annual wage in manufacturing in Sagadahoc county, which includes BIW, of $23,796 compared favorably with Maine's, $18,290 and nearby Androscoggin county's, $14,593 (Maine Department of Labor 1985). BIW wages were also high relative to the wages in the shipbuilding industry. By 1984, First Class Mechanic wages at BIW exceeded the average hourly earnings for all production workers in the industry, whereas in 1978 they were only 83 percent of the industry average (Bureau of Census 1987).
Second, because of lack of experience and internal dissention, committee members were unable or unwilling to complete the extensive analysis comparable to what the company prepared. The union's inability to adequately process and interpret financial data rendered much of their information useless in negotiations. Third, although wages at BIW were high by industry standards, a much stronger case could have been made by the union to justify wage increases on the basis of superior labor productivity. In fact, it took BIW workers only 1.5 million man-hours to build an FFG Navy frigate as compared to Todd Shipyard's 1.7 million man-hours--13 percent longer for the same ship (Buell and Payne 1985).

**Company Cost Data**

An important issue which developed during the course of the negotiations was the union's struggle to obtain cost data from the company in order to verify the company's claim for the need to cut wages. Pfeffer and Salancik (1978) make the point that information which is not collected or available is not likely to be used in decision-making. Starting in 1984 when the company tried to settle early, the union repeatedly requested all cost information relating to past, and expected profitability. The union sought the company's wage assumptions and labor productivity rates underlying BIW's bids both for the Aegis cruiser and destroyer and other types of work. The cost data were very important to the union because they would give a clearer picture of the
company's claims and counterclaims and they would have helped in the framing of appropriate union responses. The cost data could have been used to verify the profits made on the frigate program and could have been useful in determining if the Aegis program was in reality a "cost plus" program. If used properly, the cost data issue could have been important ammunition for the union case.

The seeds of the battle over cost data were planted well before the strike began. On May 9, 1985, the union's lawyer wrote to Sen. Mitchell, D-Maine, for information regarding BIW's various existing and prospective contracts with the government for the construction and refurbishment of ships and listed 10 contracts for which he wanted information "in the public domain" (Lovell 1985b, 1A). On June 25, 1985, the Navy sent the requested documents to Sen. Mitchell. Two days later, the Senator's office sent a total of 530 pages along to the union.²

Meanwhile, union president Ladd was requesting company finance data from CEO Haggett to better assess shipyard profits. On July 11, 1985, Ladd asked for detailed information on labor costs figured in bids. CEO Haggett responded on July 17, 1985, "We are prepared under certain conditions, to provide Local 6 with extremely sensitive labor cost assumptions" (Lovell 1985b, 8A).

² According to the union president, a Navy junior officer gave Sen. Mitchell's office more data than he should have. The excess cost data was in a box on the floor of the union hall and union officials were not aware of the total contents (Ladd 1989).
However, two days later, Duvin countermanded Haggett's letter. Duvin wrote to Ladd, "The union's appetite for information has absolutely nothing to do with good-faith bargaining. It serves absolutely no constructive purpose for BIW to continue responding to these requests" (Lovell 1985b, 8A). This is further evidence of Duvin's power when exercising control over the management team, and at the same time controlling the flow of knowledge and information.

On July 24, 1985, Ladd once again wrote to Haggett asking for bidding details such as "target cost, target profit sharing ratio, assumptions regarding labor costs, labor rates, and the percentage relationship between the ceiling price and the target cost" (Lovell 1985b, 8A). The next day, July 25, 1985, Ladd held a press conference to announce the union's possession of two BIW naval contracts showing that the shipyard expected a profit of $80 million. Ladd added that the union was not going to reveal its sources, and that, "I have other information . . . and there will be future press conferences to disclose that information, if need be" (Lovell 1985b, 8A).

In addition, among the documents in the union's possession was a BIW contract proposal containing sensitive data divulging how the final contract figures were arrived at. The information included labor costs, overhead rates, and man-hours to build a ship. Haggett said the document contained details which are "held very tightly...information which, in the hands of Litton-Ingalls would give them a
tremendous advantage and do us incalculable harm" (Lovell 1985b, 8A).

On August 2, 1985, the company, unaware of the union's source and threatened with future releases of information, filed suit against the union and its lawyers charging them with releasing "extremely sensitive and highly confidential" proprietary information and trade secrets concerning Navy contracts.³

The union responded that the information was obtained through the offices of Senator Mitchell and the competition also saw the contracts.⁴ On August 24, 1985, a Navy commander testified in court that BIW President Haggett tried to get him fired after he down-played the significance of a document that was released to union officials by the Navy ("BIW Wants" 1985, 26).

The union maintained that, although not legally obliged to do so, when a company relies on taxpayer money, there is an obligation to share basic financial information. The union, therefore, brought an unfair labor practice charge against BIW with the National Labor Relations Board accusing

³ Union president Ladd came back to work after a four day bereave-
ment leave when his father died and faced charges in court that he had released "secret" documents. He claimed that he was not worried because the information was available under the Freedom of Information Act (Ladd 1989).

⁴ James Bryant, a Navy procurement analyst in Washington told the Portland Telegram that Ingalls and several other defense contractors requested and received copies of the controversial documents months before the information was provided to the union (Bailey 1985b).
the company of improperly withholding internal financial
data and superficial bargaining. In a separate track, the
union asked the NLRB to press for a court order forcing
disclosure of the shipyard's comparative labor cost assump-
tions in bidding on Navy contracts. The union maintained
that charges had to be evaluated in the context of a 1956
Supreme Court decision, NLRB v. Truitt Manufacturing Co.,
which says "a refusal to attempt to substantiate a claim of
inability to pay increased wages may support a finding of a
failure to bargain in good faith." In other words, if
asked, the company must provide information requested by the
union to support those positions that are based on an in-
ability to pay. The decision stressed that good faith
bargaining requires that each side's claims be honest.
"This is true about an asserted inability to pay an increase
in wages. If such an argument is important enough to
present in the give-and-take of bargaining, it is important
enough to require some sort of proof of its accuracy" (NLRB
v. Truitt 1956).

Duvin stated that the Truitt decision "is irrelevant to
this case [BIW]. It doesn't apply to these facts" (Lovell
1985c, 18A). Congoleum, being a privately held corporation,
was not obligated to open its books to anyone, and it cer-
tainly was not about to release sensitive data that could
have been utilized by its shipbuilding competitors. BIW
public relations spokesman, Jim McGregor stated, "What it
really boils down to is that Local 6 does not run this
company and is not going to . . . [the books are] none of their business" (Allen 1985, 4).

The regional NLRB supervisor responsible for the case indicated that part of the union's charge was informally authorized for the issuance of a complaint (Lovell 1985c). The union's request for cost data was forwarded to the NLRB office in Washington, D.C. and not heard of for the duration of the strike. One member of the negotiating committee believed that the union was denied access to the data by the NLRB because the company was not claiming financial hardship at that time. He stated that, "the company claimed they were only protecting jobs in the future" (Ventry 1989).

The issue of access to company cost data became very important to the balance of bargaining power in the BIW contract settlement. Because the company initially demanded a wage reduction instead of a pay freeze, the dispute over cost data became a focal point for the labor dispute. The court battle over the sensitivity of data only served to keep the union on the defensive and it also focused the parties' attention away from other negotiating issues. In fact, on August 12, 1985, a court hearing on the cost data forced the postponement of renewed contract talks called by the federal mediator after a three week impasse ("Court Date" 1985). In addition, the denial of access to company data reinforced the power of the company by frustrating the union efforts to construct a coherent economic argument in their favor.
In sum, a comprehensive assessment of comparative wage data was important for the company to better evaluate the costs of agreeing to the union in terms relative to the other firms in the industry and the union's lack of access to the cost data hampered their assessment. Although the company labor cost data could have been useful to the union, the company held close control of this source of power because of the sensitivity of the data. Access to company data played a decisive part in the negotiations through the power it imparted upon the company and the vulnerability it created in the union side.

**Strategies and Tactics**

In keeping with Kuhn's terms, in the BIW negotiations, strategies refer to relatively long-range or wide scope of action, while tactics accept the strategic situation as given and operate more narrowly within its limitations.

**Company Strategy**

The first thing to recognize was that Congoleum and their labor lawyer, Robert Duvin, were in charge of devising company strategy and tactics during the negotiating period. Duvin understood that Congoleum was his client and he was their presence in the negotiations. Furthermore, Congoleum was a strong corporation that had the resources to see the impasse through. In Duvin's words, "It's tough for workers to outlast it when you get into an absolute war of attrition" (Duvin 1988).
In addition, Conoleum was a privately held corporation headed by the very tough and determined CEO, Eddy Nicholson. As a result of these factors, the company negotiators knew exactly what they were looking for in terms of reduction in labor costs. If there was any confusion or misunderstanding about the purpose of the company on the negotiating team, it was quickly clarified by Nicholson and his intentions were carried out by the labor attorney (Duviv 1988). Regardless of what the local management may have thought, Duviv had a clear view of the negotiating goals and the full support of his client as he employed strategies designed to realize these goals.

The initial strategy in the spring of 1985 was to try to be persuasive in order to achieve the goals. However, the initial strategy quickly evolved into very hard-nosed negotiations. The director of labor relations indicated, "We had to shock them into reality, back from the days of the $2.50 contracts. They had to understand that their jobs could be at stake if BIW could not compete" (Wilson 1988).

Chamberlain (1965) sees a company as an instrument through which individual goals may be realized—material gain, work satisfaction, occupational position, status in the community and a sense of accomplishment. "On the frigate contract, the company said that we did a great job ... and then in negotiations they were saying that we weren't worth a damn," stated the union president (Ladd 1989).
BIW increased the cost of agreeing to its terms by ignoring intensely held objectives relating to the individual worker's principles and sense of fairness. One union committee member observed that, "when they asked us to pay for health insurance, it became a demeaning thing" (Ventry 1989). According to Chamberlain (1965), "The intensely held objectives relate to such matters as conceptions of good and evil--The conception which a person has of what he wants to become" (233). When the company drove the terms down as low as they did, not only would an impasse be inevitable, but even when a settlement was reached, much bitterness remained. The shipyard workers simply did not believe that their efforts were being appreciated. "If we are the most productive workers in the industry, why do they treat us like this?" asked one negotiator (Meader 1988).

The willingness of the militants to stay on strike when facing grave odds is evidence of their search for some respect from the company and from the community. The union's unwillingness to accept company demands for deep concessions stemmed from "Downeast" sense of right and wrong. Somehow, it did not seem fair to Bath people to have a profitable company demand concessions of its work force. The shipyard workers' perception was that they were being asked to work for less pay and reduced benefits while the shipyard was being shopped around to be sold to another private investment group. To some extent, the BIW labor dispute represented a clash of cultures and meanings.
Congoleum's hard line, rationalistic, and primarily economic orientation failed to recognize the deeply held cultural values and beliefs of the Maine shipbuilders. This clash had a number of long-term consequences which are addressed in Appendix B.

As the negotiations progressed toward the expiration date of the contract at the end of June 1985, the company assumed a cold and hard position at the table. Duvin demanded significant wage cuts which he really did not expect to obtain. He explained, "We were hoping we could get some attention to [wage cuts], and when we gave that up, maybe other things would start to fit" (Duvin 1988). The company was also demonstrating that it was willing to take a strike. The union president claimed that Duvin said to him, "we're forcing you out on strike" (Ladd 1989). However, the BIW director of labor relations saw the demands for wage concessions as a strategy of leaving room to bring the union back from strike (Wilson 1988).

Especially important within Chamberlain's (1965) formulation is the compromise, the offer constitutes an attempt to increase the opponent's bargaining attitude through a lowering of his agreement costs, while also possibly decreasing one's own disagreement costs through a downward revision of the expected length of stoppage necessary to achieve one's own demand. During the early phases of negotiating the BIW contract, neither party made promises of cooperation to the other. Because the negotiations quickly
evolved into an impasse, the tactics of compromise did not have much chance of being utilized.

Given the gap in their expectations, the rejection of the company offers and a strike by the union was all but inevitable. The result of these hard-line tactics was to place the parties at what Duvin referred to as "structural impasse" (Duvin 1988). Duvin believed that because of the impasse, the normal strategies and tactics of bargaining at the table were not productive. In his view, when the parties reach this type of entrenched impasse, "the powers of persuasion simply do not make any difference" (Duvin 1988). In Duvin's opinion, "The [BIW] situation can be seen as a structural impasse wherein the powers of persuasion simply do not make any difference because the negotiators are moving in opposite directions". Duvin pointed out, "You can be the greatest guy in the world, talk baseball and be well liked and a lot of other shit and it doesn't change the reality that the parties' positions are at an impasse" (Duvin 1988).

Insofar as the company fully expected the union to go out on strike, the supervisors were briefed and well prepared for the strike. When most of the rank and file took their tools home with them on the Friday before the vote, it was a strong indication of how the union was about to vote. In order that company property be protected in case things got out of hand, at the request of the Bath city police, who work closely with the BIW security forces,
twenty-four state police troopers, complete with riot gear were stationed in Bath.

Company Strike tactics

Once the strike began, the company employed a different set of tactics in order to reach a settlement consistent with their original negotiation goals. The first tactic was to bring the other union locals back from strike in order to break the morale of the striking shipbuilders. The draftsmen were first and they had in effect buckled before they even went out.\footnote{The strike coordinator indicated that after Local 6, IUMSWA settled, the draftsmen, who were not satisfied with the terms of the contract, wanted to re-open negotiations after getting what he termed, their "free settlement" (Dudley 1988).} From the outset, the shipbuilder's picket lines were not honored by the unionized workers of the Bath Marine Draftsmen Association. This serious breach of worker solidarity also allowed BIW to continue work on the design phase of the new destroyer contract. One member of the committee indicated that, "a hard blow for us was when the draftsmen refused to honor our picket line" (Ventry 1989). Not surprisingly, posters sprouted on the Local 6 picket lines asserting, "I'd rather have a sister in a whorehouse than a brother in the BMDA" (Brandow 1985, 32).

On August 29, 1985, BIW reached a tentative contract with the 400-member draftsmen's union, whose members were designing a new class of destroyer. Final terms of the agreement were to be contingent upon the settlement of the strike by the shipbuilders. On September 17, 1985, a
tentative settlement was reached between BIW and 370 clerical workers who had been on strike since April 21, 1985, the longest strike in the shipyard's history. Once again the settlement hinged on any increases or bonus negotiated by the striking shipbuilders union. After reaching these agreements, BIW said that it would not change its position on the need for concessions, and the union called off talks.

Duvin believed that since the clerical workers were in the same international union as the shipbuilders, their return had a "profoundly important psychological effect." Duvin stated, "The union guys may still deny it, but seeing their brothers and sisters cross the picket line really broke their will" (Duvin 1988).

The former president of the shipbuilders union local in Quincy, Massachusetts wrote in the Boston Globe, "Isolated and angry, the skilled trades watched the other two unions cash their weekly paychecks with the promise of more to come when Local 6 settled. Demoralization was inevitable" (Brandow 1985, 32). In Brandow's view, Bath not only joined in the national chorus of demands for a concessions-riddled contract in the midst of profits aplenty: It has also unearthed a new and devastating means to exploit the antagonism between unions, with the full voting cooperation of their memberships (32).

The company's chief strategist and labor attorney, Robert Duvin, repeatedly focused on the theme of negotiating will. The second part of Duvin's strike strategy was to
convince the union that Congoleum Corporation had the strength and the resolve to last longer than the union in the strike mode. Duvin stated to the company team, "these guys are professionals, the shipyard is making money and we can't convince them on logic. However, they will buy the recognition of the company's resolve." The central theme of the company's resolve finally helped to break the will of the union. In Duvin's words, "We were not negotiating positions. We were quite frankly negotiating will. We were negotiating endurance" (Duvin 1988).

Once the strike began, Duvin's objective was to convince the union that the final outcome of the strike was already determined. The only option left to the union was deciding how long they wanted to stay out. Duvin indicated, "If they want ten weeks of strike, they can have ten. If they want forty weeks, they can have that too! It was not going to change the ending" (Duvin 1988). Duvin's contention was that, as angry and combative as the militant member of the union became over this bargaining attitude, it ultimately began to erode their will.

In sum, in a long, tension filled strike over significant concessions demanded of the union, the bargaining had deteriorated into a "war of attrition." In such a situation, the key to victory was breaking the union's will. Duvin's two-pronged strategy of bringing in the other locals while indicating a strong company resolve contributed
significantly to the company success in the contract settlement.

**Company Tactics to Insure Ratification**

As part of the tentative agreement reached on October 2, 1985, the company employed effective tactics to insure that the rank-and-file would ratify the contract. The tactics involved a carrot and stick approach. The "carrot" was the $2,000 bonus paid over three years to the returning strikers. The director of labor relations claimed that BIW was just copying a tactic that already had been used by other companies to offset the impact of two-tier wages (Wilson 1988). The immediate bonus of $1,000 had a significant influence on workers who had been on strike for fourteen weeks. The "stick" was the threat to open the shipyard the following Monday if the contract was not ratified. Given the length of the strike without significant progress from the union committee, it is reasonable to assume that many members would have crossed the picket line. This threat seriously jeopardized the future of Local 6 at BIW. Indeed, national union president, Arthur Batson felt that the 1985 negotiations were designed to break the union. His resolve to avoid this occurrence is evident in the following, "I said we would spend every dime in the national to fight the company demands" (Batson 1988). As it turned out, the dispute took $400,000 to $500,000 out of the national union strike fund (Batson 1988).
Because Duvin saw the BIW dispute as a war of attrition, it is understandable that many of his strategies could be seen as attempts to divide and conquer. The most experienced member of the union committee, Arthur Batson believed that the company's bargaining power resulted from their success at dividing the union committee. In his opinion, "Duvin was a master at dissention" (Batson 1988). In effect, all of Duvin's strategies and tactics from bringing in the other locals to threatening to open the yard were designed to promote dissention among the negotiating committee, among the rank-and-file, and between rank-and-file and the negotiating committee. It was no accident that the committee remained in a state of turmoil throughout the negotiations and never did manage to achieve any sense of unity. It is also not surprising that three years after the settlement, committee members still could not agree on what went wrong.

The determinate factor which led to the success of the company strategies is that Congoleum hired a very capable labor negotiator who was able to devise and implement effective strategies and tactics throughout the entire period of negotiation. Although there may have been internal disagreement on the choice of strategies and tactics, the company team spoke with one voice, Duvin's. The strategies and tactics employed by the company were uniformly designed to create dissention on the union team, and over the long run, win the war of attrition by breaking the will of the
union. Duvin's strategies of settling with the other unions and demonstrating company resolve had the effect of significantly increasing the union's cost of disagreeing with the company demands. Once the union's cost ratio exceeded unity, it was only a matter of time before a settlement was reached.

**Union Strategy**

In the spring of 1985, the union committee entered the negotiation with the notion that they could bargain at least as good a contract as the one they had turned down in the previous year. When they were met with the cold and hard approach demanding significant wage concessions, it threw the committee into a turmoil from which they were never able to recover.

The initial strategy was simply to negotiate what they perceived as a fair and reasonable contract. Union president Ladd (1988) stated, "Initially we realized that the shipbuilding industry was in trouble, but that BIW had contracts. We made what we thought was a reasonable proposal—but we also left room to negotiate". The committee knew what the membership wanted in terms of the ultimate contract and the goal was to move the settlement in that direction. One committee member said, "you just chisel away at the offer of the other side" (Ventry 1989). However, when the company initiated hard-line bargaining, the negotiating environment underwent a radical transformation. One member felt that, "once our initial attempts for an
increase got blown out of the water, there was nothing to get" (Ward 1988). In effect, the union had no coherent strategy after that. Another union committee member stated that, "we didn't have any strategy after the first two weeks, other than what Arthur Batson could concoct" (C. Finn 1988). During the negotiations, when some members of the union were picketing their own negotiating committee, the same member expressed, "that says it all!" (C. Finn 1988). It was evident that the dissention on the committee extended to the rank-and-file.

When asked what gave the union leverage, the union president replied, "Tell them no and do not budge from that stance. When I did not want to move on an issue, I would just sit there and grin" (Ladd 1989). This was Ladd's first experience at negotiating a labor contract and his demeanor at the bargaining table impeded the resolution of issues on several occasions.6

A significant factor which led to the failure of the union strategy was that the committee did not have the local leadership to counter the strategies devised by Duvin. The inexperienced president of Local 6 certainly was not in control of the negotiating committee. Furthermore, no other member of the committee was both willing and able to assume control. Some members had lost faith in their own

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6 Three years later, when asked how he was adjusting to his new job in management, Ladd replied, "anything after the 1985 contract will be a piece of cake for the rest of my life" (Ladd 1989).
committee. As a result, whatever the union tried for strategy remained muddy and divided throughout the entire negotiation. One committee member stated, "the negotiating committee had eight people with eight different ideas on which way to negotiate. Objectives changed on a day to day basis" (Ventry 1989).

There was a wide divergence of opinion on the committee about the proper strategy for resisting management demands. The most militant member of the committee realized early on that Duvin was engaged in a test of wills. His response to the management demands was to meet tough with tougher. His negotiating tactics were to, "just keep bullying [his] way through . . . he who has the upper hand wins" (Meader 1988). The militant faction of two or three of the committee recognized that there was no way to negotiate given the level of company demands. The company was not moving and neither would they. The most militant member's view was, "to at least stay where you're at... hold your ground... that's the way management negotiates" (Meader 1988). Like Duvin, the militants viewed the impasse as a war and felt their only real leverage was to stay on strike until it hurt the company more than it hurt them. They still believed that the way to defeat the company was to continue the strike beyond the two or three months the company expected. Some militants still believe that if the strike would have lasted a few more weeks, it would have been successful. The union president felt that "we should have stayed out two weeks
longer. They [BIW] were starting to hurt. They began to worry about how long we were willing to stay out" (Ladd 1989).

The one experienced negotiator on the union side, national president, Arthur Batson, was familiar with various bargaining strategies and tactics. Batson understood the tactics of divide and conquer and he and Ladd were able to resolve two or three major issues with Haggett when Duvin was absent. A tactic preferred by Batson was to negotiate well into the night because he knew that the late hours did not suit Duvin well. Batson claims that the parties came to terms only after Duvin was crashed out on the couch. Batson told Duvin that, "we would see the sun come up . . . and we did. That's when I [would] usually win and he knew it" (Batson 1988).

**Union Strike Conduct**

Once it became clear that a strike was likely, the union responded by planning and conducting a well-organized and well-run strike. From the union perspective, 1985 saw the highest level of preparedness ever for a strike. After the 1984 attempts to re-open the contract, the rank-and-file fully expected a strike several months before the contract expired. For the first time in eleven years, when an earlier strike was fully anticipated by the union, workers were putting away extra savings by January. It should be noted that there were no home mortgage foreclosures as a result of the strike.
Benefits/Food. The benefits food program was an important factor in the union's attempt to maintain morale during the strike. Feeding 400-600 picketers a day seven days a week 24 hours a day required four shifts of volunteers in the union hall kitchen. In addition, up to $1,400 worth of food was distributed to 275 needy union families each week. However, it was more convenient for local strikers to pick up their bag of groceries each week than it was for long distance commuters. The statewide food caravan collected five tons of food for distribution and the teamsters donated the use of a trailer truck box. Monetary donations were used to create a base and buy staples. "BIW thought the union would go out for two weeks, they would up the ante a little and the workers would come back. This view changed when two truckloads of food were parked outside the union hall" (Portella 1988).

The food bank was not exactly what the director had envisioned, but it was the first of its kind in the state. The overall program was a success as the AFL-CIO Convention passed a resolution for a permanent food caravan. The food bank of members helping other members lessened the need to cross the picket line and contributed greatly to union solidarity and striker moral.

Job Bank. When members of the union team realized that management was prepared for a long strike the idea of a job bank emerged. Fortunately for the union, The Chief Steward at Bath, Scott Johnson, acted on the idea and he turned out
to be very capable at organizing and coordinating the job bank. Newspaper advertisements were run in the Lewiston and Portland, Maine newspapers that claimed the most productive work force in the industry was available for work and a 24 hour phone number was listed. Within a half hour prospective employers were called back. This effort created a snowball effect of additional job opportunities (Johnson 1988).

The union was not involved in negotiating the hourly wage rate as that was decided between the striker and their new employer. The low hourly rate was $4.50 for temporary service and the high was $20.00 for boilermakers. The best jobs were in construction where Local 6 had contacts with labor unions. Some electricians went to Woodland Paper and made wages which exceeded those in the shipyard. After two weeks, thirty fire fighters went to the west coast as a result of a T.V. interview about the job bank. About forty-five electricians were sent to work at Seabrook Nuclear Power Plant, but they were only hired if they had a referral slip from Local 6. The goal was to make enough money in a quarter to draw unemployment if that became necessary. During negotiations, the job bank coordinator even asked management and the federal mediator if they needed any work done (Johnson 1988). He was delivering the message that he intended to put every striker to work.

The job bank located about 1,000 jobs for strikers and was an example of the union helping workers to help
themselves. The union assistance in securing jobs for strikers was also important for the Local's image with its own members. It helped to alleviate the feeling of helplessness in the middle of unproductive bargaining.

**Picket Line Activity.** In the 1985 strike, the union picket line had more participants than in previous strikes. All observers, including the company labor relations office, complimented the job of the union strike coordinator who controlled the picketing to the extent that there was no violence and no workers were jailed or lost their job as a result of incidents on the picket line. Even Duvin said it was the best mannered strike he had ever seen (Duvin 1988). The union president stated, "we had to show the community that we are not hooligans" (Ladd 1989).

The strike coordinator, Milt Dudley, also served as a liaison with the local police and consulted with the union lawyer about ramifications of picket line activities. There were six picket sites and he felt that, "shift captains had to be reading off the same page" (Dudley 1988). According to the strike coordinator, the excellent discipline displayed on the picket line was the result of early planning, extensive communication and willingness to expel some radicals and anybody drinking from the picket line (Dudley 1988).

It is clear that the potential existed for violence on the picket line as emotions were running high on the part of the shipyard workers. The union president pointed out,
"Nobody ever crossed our picket line. People were scared to cross" (Ladd 1989). Some members of the committee felt that the strike activity was too mild. "In essence, we did nothing while they were taking away our livelihood" (Ventry 1989). There were, however, some breaches of decorum by union members and unsubstantiated reports surfaced of management negotiating team members receiving multiple subscriptions of *Playgirl Magazine* and deliveries of dead fish on their doorstep. Local 6 also picketed the corporate headquarters of Congoleum Corporation in Portsmouth, New Hampshire. The union president observed that, "it sure did make them ugly. They didn't like that!" (Ladd 1989).

The national union provided financial help and advice, but national union officials let Local 6 people make their own decisions. Picketers received $40 from the national union and $20 from the local per week. One member of the negotiating team recalled the image of a 22-year-old new hire walking the picket line with his wife and baby protecting his $6-per-hour job which was, up to then, the best job he had ever had. He remembered that, "this kid never complained, he just kept walking. There was no morale problem on the picket line!" (C. Finn 1988).

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7 During the strike, there were reports that management had installed a bow section on a cruiser which was aimed four degrees to starboard. The most militant member of the union was suspended for five days without pay for wearing a model of a destroyer with a crooked bow on his hard hat (Meader 1988).
It seems that when faced with company demands for significant concessions, the union was forced into the only course of action available, a strike. Once they became committed to a strike, the union settled in for what they believed would be a long drawn-out battle to force the company to lessen its demands. The benefits/food program, the job bank and the well run picket lines did serve to bolster morale among the striking workers. However, it did not change the outcome of the labor settlement and it failed to break the resolve of the company negotiators.

In sum, when analyzing the effect of the strategies and tactics of both parties on the final settlement, it is clear that the company held an overwhelming advantage. The parent corporation had the resources and the determination to drive a labor contract that suited its needs. When Congoleum brought in a professional labor lawyer who was willing to obtain concessions by implementing hard-nosed strategies and tactics, by bringing the other locals back, and by negotiations will and endurance, the union was simply overmatched.

**Meeting Informally**

During preliminary discussions with union officials following the settlement, a member mentioned that union officials and mid-level management did meet periodically at a local tavern to discuss issues pertaining to labor relations. With this information in mind, the interview schedule for the case study included a question about the
value of informal meetings (see Appendix F). Data from the shipyard interviews provided insight into another separate level of negotiating.

The aspect of bluffing addressed by Chamberlain (1965) indicates there is a good deal of subtlety to the bargaining process. It is part of the job of persuasion of each of the parties to convince the other that the costs of agreeing are actually lower and of disagreeing are actually higher than the other may have estimated, thereby moving the other's "final" position. The whole negotiating process sends clues about the other party's agenda. One way to cut through the bluffing is an exchange of confidences by leaders of the respective teams.

It was revealed that at BIW in 1985, much negotiating was conducted "off line" away from the turmoil of the negotiating table. Predictably, there were varying opinions about the value of side shows going on during the negotiating process.

Company View

The experienced labor negotiators on the company team believed that in general, meeting informally was an acceptable practice that could be very effective if done right. The labor relations office warned, however, that it could be very destructive if done wrong. In Wilson's opinion, "The issue moves from credibility to distrust" Wilson 1988). Informal meetings were viewed by him as being very troublesome during the 1985 negotiations. Information was conveyed
privately between individuals on each team. As a result, "only a few people were operating with a full set of facts" (Wilson 1988). It disturbed some members of the management team that Duvin was talking "off-line" to the union president. It also bothered them that labor attorney Robert Duvin seemed to be negotiating "off-line" with company president, William Haggett (Wilson 1988).

Duvin admitted that he engaged in many "off-line" meetings, but in his opinion, "it just didn't work much." Duvin felt that he was able to persuade Ray Ladd in these talks, but Ladd did not have a free hand to make concessions (Duvin 1988). The militants on the negotiating committee would not agree to terms that were the same level as the eventual settlement. Vice President Bancroft felt that meeting informally could be beneficial only if "you are very selective and very targeted" (Bancroft 1988). When asked about meeting informally, Haggett responded, "That's the way the process has to work" (Haggett 1988). However, he was disappointed with the fact that the informal meetings were ineffective in the 1985 negotiation. Haggett claimed, "With that [1985] group, you had to deal at the table, thrashing it out." For example, he stated, "We could get 90 percent of the way through, but fail on the last 10 percent. We would get an agreement, and they would deny it at the table or go to the press with our demand for wage concessions" (Haggett 1988). It is clear that company negotiators believed in the concept of informal meetings, but that in
the 1985 labor dispute, such meetings were only counter-productive.

Union View

It is not surprising that the union committee was divided in their opinion on the value of meeting informally. Some members saw these meetings as a good way to avoid the divisiveness on the union committee. Off-line meetings seemed to offer the possibility of reaching agreement in a one-on-one setting away from the turmoil of the committee. The strike coordinator thought that in the friendlier atmosphere of an informal setting, ideas could be discussed that would not be presented at the table. He said, "You're not locked into a position. You can cover the full spectrum of possibilities" (Dudley 1988). However, the benefits coordinator felt emphatically that no informal meeting should take place during bargaining. He believed that, "There needs to be structure. Both sides need to know where they are coming from" (Portella 1988).

The national union president believed that informal meetings only enhanced the problem in 1985. He believed that the company was getting and creating false messages. He warned other members about talking to Duvin because, he said, "You can't really be sure who said what in a one-on-one" (Batson 1988). A member of the committee observed that, "everyone on the committee did not get to hear everything the company offered--good or bad." He indicated, "that the rest of the committee just sat and waited and were
surprised when the company offer was presented to the membership" (Ventry 1989).

Moderates on the committee saw these meetings as having potential to "grease the skids" to settle the contract. As a member pointed out, "After all, it was usually Bath people we were dealing with." The key to the informal meetings was in his opinion to talk enough dollar figures to be able to get the whole picture (C. Finn 1988). One moderate member saw the whole negotiating process as being informal. He felt that many meetings were required to "keep hammering to be specific" [on negotiating issues] (J. Finn 1988). He also believed that it was acceptable for the union chairman to meet with the company as long as others on the committee were kept informed. Another moderate felt that if a person from each side could communicate, it possibly could move the negotiations closer to a point of settlement (Johnson 1988). In fact, Ladd and Johnson did meet with Duvin prior to the strike and determined what it would take to move the contract. In contrast, the militants on the committee were adamantly opposed to any members talking to management away from the table. One stated, "I don't want to drink beer with a guy putting six thousand people out on strike intentionally" (Ward 1988). The militant members of the committee believed that off-line conversations with Duvin were just part of his overall strategy of divide and conquer. Another commented that "Management just gives you that 'good ole boy' routine." For this militant, the adversative role
was important. In his opinion, "you need respect" (Meader 1988).

Another committee member believed that, "we are all elected to negotiate. Every committee member should be involved in the process--otherwise, you are not negotiating." This member further pointed out that, "two or three people on the committee don't necessarily indicate the full intent of the committee" (Ventry 1989).

The union president saw no benefit to meeting with the company informally during the 1985 negotiations. In his opinion, "They knew what they wanted for two-tier wages and health insurance and it didn't matter where you met" (Ladd 1989).

The interview data indicates that both the company and the union believed that in general, meeting informally during the negotiating process had potential for making progress when bargaining had stalled at the table. However, in the 1985 negotiations, "off-line" negotiations between individuals on the respective teams were seen as disruptive and troublesome. Individuals on both sides who were left out of the informal meeting felt that they could not effectively contribute to the bargaining process without a full set of facts. There was very little subtlety to the bargaining process as the negotiations quickly became confrontational, and the divisions on both teams made informal meetings counterproductive. As a result of internal team
dissention, neither side was able to effectively gain bargaining power through control of informal meetings.

Outside Forces

According to Chamberlain's (1965) theory, bargaining power is seen as more than just a reflection of the individual negotiator's personal powers of persuasion. Bargaining power is a reflection of all the circumstances--economic, political, social, psychological--surrounding the negotiating parties. Kochan (1980), who depicts structural, environmental, organizational, and managerial sources of power affecting collective bargaining outcomes, argues that "the triggering forces affecting bargaining outcomes" are environmental variables (311). Interview data indicated that at BIW the following outside forces had the potential to influence the outcome of bargaining: (1) Congoleum officials, (2) the media, (3) the federal mediator, and (4) the Navy.

Congoleum Officials

Although the owners of Congoleum Corporation did not directly engage in bargaining, all parties agree that the parent corporation was an unseen powerhouse at the table. However, Duvin vehemently expressed the opinion that because Congoleum owned BIW, they should not be considered an outside force (Duvin 1988). In addition, one committee member characterized Congoleum as "not an outside force. They were the force" (Ventry 1989). However, a majority of both
management and labor at Bath, Maine perceived Congoleum officials as outsiders. Formal authority derived from ownership in a corporation is described by Morgan (1986) as a primary source of power in an organization. Congoleum's hand-picked vice president Ronald Bancroft, thought that the whole issue of absentee ownership was a continuous source of conflict. According to Bancroft, "Congoleum's image was of out-of-state investors coming in here to extract the last pound of flesh" (Bancroft 1988). This image was fostered much earlier by the former president of BIW, John Newell, who stated in 1970,

We had the most spirited and dedicated team of shipbuilders in the country, . . . men and women who would have done anything for the company. This spirit unfortunately has gone and many of the able people there left to be replaced by bright young boys from out of state who just don't have what it takes to get work out of a State of Mainer (Snow 1987, 527).

Articles in the Maine Times and in the Portland Press Herald were very unflattering to the owners of Congoleum and enhanced their image as out-of-state investors not in tune with the needs of BIW shipbuilders (Allen 1985; Caldwell 1983, 1985). These articles impacted not only on the public, but also on the perceptions of the local negotiators at the table. The union cause received the support of the public, and sympathetic articles in the press over the company demands of a two-tier wage structure reinforced this support.
With the local management not in total agreement with Congoleum's agenda, the bargaining came to be perceived by local negotiators on both sides as "Congoleum v. Maine" (Ward 1988). Although Congoleum had owned BIW for ten years, when CEO Nicholson took direct control over the labor negotiations in 1985, his takeover was met with some resentment on the part of the BIW management. When the usual BIW negotiating team members were replaced first by chief negotiator, Bancroft, and then by labor attorney, Duvin, the effect was to have BIW management lose stature in the eyes of the union. Union officials quickly realized that BIW had no free hand in the bargaining. When the national union president and the federal mediator were left waiting at the union hall while company president William Haggett had to travel to Portsmouth, the perception naturally arrived at by the union was that Congoleum was in complete control of the negotiations. Pfeffer and Salancik (1978) point out that even when a relatively prominent position in the organization [such as CEO Haggett] has been achieved, the discretion permitted to a given individual is limited. "Decisions may require the approval of others in the organization" (10). One committee member observed that, "BIW management were forced to do what they didn't want to do . . . they were told" (Johnson 1988). In the opinion of the strike coordinator, "The local management was not any more of interest to Congoleum than local 6" (Dudley 1988). In the words of another union committee member, "Radaker and Nicholson had
unlimited money. They gave the company one year to get what they wanted or break the union" (Ventry 1989). Both shipyard personnel in both labor and management came to resent the interference of the parent corporation in labor negotiations which, to 1985, had been a local process.8

At the time the contract was being negotiated, the union strike coordinator and publicist was making the charge that Congoleum Corporation was only trying to get a more favorable labor settlement in order to make the company more attractive for the inevitable sellout of BIW. He pointed to statements made in Business Week, March 19, 1984, by Byron Radaker of Congoleum that after a buyout, the owners had an "obligation to sell" (Dudley 1985). In addition to the strike coordinator, several members of the union committee believed that Congoleum always intended to sell BIW. One member of the union committee claimed that during the negotiations, Duvin admitted to him that Congoleum was trying to sell BIW (C. Finn 1988). After the sale of BIW in 1986, the union strike coordinator stated that, "Congoleum called the shots from start to finish" (Dudley 1988).

Both company president Haggett and vice president Bancroft deny that they knew of Congoleum's plans to sell BIW at the time the contract was signed. In fact, Bancroft claims that Nicholson told him to be prepared to hold his

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8 In addition, seeing Congoleum officials jetting off to Wimbledon in June 1985, just prior to the expiration of the previous contract, only enhanced their "absentee owners" image with shipyard management and labor (C. Finn 1988).
BIW stock for at least five years since he did not think that BIW would be ready to be sold for three to five years (Bancroft 1988). Haggett claimed that, "One week after the settlement, Nicholson came here and announced his intentions to me to spin the company off. He must have done some fast thinking!" (Haggett 1988). Given the advantage of hindsight, the director of the labor relations office agreed that Congoleum had a definite agenda. In his opinion, Congoleum wanted a competitive contract to enhance the market value of BIW before the sale (Wilson 1988).

The overall effect of Congoleum officials was that even though unseen at the table, they were a very powerful influence on the eventual outcome of the bargaining. Congoleum's strong role in the 1985 negotiating not only caused dissention and resentment on the management team, but it also tended to galvanize union opposition to any management offer and contributed to the split on the union committee. The union moderates hoped the negotiations would be conducted as they had been in the past, while the militants perceived the negotiations as a war of attrition against absentee owners. Given the vast resources of the corporation, the skill of their negotiators, and their determination to obtain a favorable settlement, Congoleum officials had a profound impact on the 1985 labor settlement at BIW. Although they controlled the negotiations from a distance, as corporate owners, they possessed sufficient power to drive a settlement favorable to their aims.
BIW stories are usually front-page news in Maine because BIW is the largest private employer in the state and its $250 million annual payroll has a significant impact on the economy of the seacoast region. BIW management is fond of boasting, "as BIW goes, so goes Maine." Even though the company did very little talking to the press for the duration of the negotiating, Haggett's overall assessment was that the media provided a fair representation of the strike\(^9\) (Haggett 1988). The full-page advertisements in local newspapers seemed to be effective in at least representing the company's story of competition in the industry. Duvin acknowledged that, "in a big community-wide negotiation, it is helpful if the company can use the media to get its grim message across." However, Duvin mentioned that Congoleum had a difficult time getting its story told in the press because Haggett had control of the media (Duvin 1988).

On June 30, 1985, the same day that the union voted to go out on strike, BIW gave a clear indication of its overall strategy for the duration of the strike. The company ran a full-page advertisement in the \textit{Maine Sunday Telegram} entitled "The BIW Story: Think About It". In this ad, BIW

\(^9\) The director of labor relations was not as comfortable with the media as Haggett and he gave an example of why he felt that way. At the Bowdoin College alumni house while negotiating on the second floor, they looked out the windows and saw a T.V. camera on a periscope (Wilson 1988).
detailed the problems in the shipbuilding industry and gave a comparison of hourly wage rates and fringe benefits to show how high labor costs were at Bath. This ad not only demonstrated BIW's basic negotiating position, but also its willingness to take its case to the public in full-page advertisements. The last line in the ad claimed that "BIW will insist on concessions because it is the only way to maintain a competitive position within the industry, a healthy company and protect the jobs of people we truly care about."

Besides the newspaper advertisements, BIW did very little talking to the press for the duration of the strike. When the union requested a broadcast debate over the issues brought up in the ad, Haggett declined saying, "I don't think that's a place to negotiate a labor contract." When talks broke down on July 17, 1985, although the union and the federal mediator had much to say, Jim McGregor, BIW public relations director, said management had no comment on the negotiating session. This "no comment" stance by management resulted in the union's story being "the only story in town" for reporters covering the negotiations. Even BIW's main competitor, Ingalls Shipyard, would not give the Portland newspapers an interview. As a result, the
union received more favorable press coverage than they otherwise would have had.10

The public relations campaign was seen by some union officials as potentially a way to gain some bargaining leverage at the table. Since the company was not doing much talking, the union publicist took advantage of the opportunity and used the media to emphasize the union message of "corporate greed." Because the union lacked a unified strategy after the strike began, the burden of the union response fell on strike coordinator Milt Dudley. Dudley was not a member of the negotiating committee. However, he did an effective job with press releases which were intended to influence public opinion and keep up the morale of the strikers. The strike coordinator's aim was "to let the state of Maine know that the union was being treated unfairly" (Dudley 1988). The union president claimed that, "we did go on radio and T.V. and made our case to the public . . . and for the first time in years, we had a great deal of community support" (Ladd 1989).

The union effort was compromised to some degree by individual members of the committee "leaking" to the press. The factions on the union committee were not above using the media to enhance their position in the negotiation.

10 An exception was the story written by reporter, Abby Zimet, in the Maine Sunday Telegram. After the interview, union officials were confident of a favorable story. However, the article depicted shipyard workers as not being very bright and yet living "sumptuous lifestyles" on their high BIW wages (Zimet, July 7, 1985, 1).
However, even Dudley questioned whether the union media effort could make a difference in terms of bargaining power at the table. After the union was forced to run advertisements to counter the company's, Dudley was concerned that the public really did not care, "and if they did, it would have no influence on management" (Dudley 1988).

After settling with the draftsmen and the clerical workers, BIW once again went public and exchanged barbs with the union in a series of full-page newspaper advertisements. The company blamed union leaders for substituting "stubborn resistance for thoughtful decision-making" and suggested that economic conditions could force the yard to close. Haggett also vowed to open the gates to workers who wanted to return if the strike is not settled within two weeks—on BIW's terms. The union reply was to run a newspaper ad telling Congoleum that it was time to send Haggett to the negotiating table.

In sum, the media seemed to have very little impact on the negotiations. Even if the union could have convinced the public of Congoleum's corporate greed, these charges had very little impact on the owners of Congoleum and even less effect on their "voice" at the table, Cleveland lawyer, Robert Duvin. In this case, a certain amount of public sympathy gave the union very little bargaining power.

**Federal Mediator**

Mediation is a process in which a neutral third party attempts to assist the principals toward reaching agreement.
The procedures used are tailored to the situation and are aimed at maintaining communications and pointing out settlement cues that the other party has missed (Fossum 1982, 300). Although some parties use mediation as a matter of course, the mediator is most often dealing with a difficult situation because higher involvement would be unnecessary if the parties were able to agree on their own. Frequently a mediator is brought in after an impasse has been reached and negotiations have broken off (Fossum 1982, 300).

Historically, the federal mediator, William McGonagle, had been very effective in keeping the parties at BIW negotiating until a settlement could be reached. His role was to assist the parties in resolving issues. However, in 1985, his effectiveness was severely limited by off-line conversation away from the table. He felt that this case was difficult because of all the divisions. Divisions on the management team, and the split on the union committee left the mediator wondering whom he should talk to. McGonagle claimed, "A situation developed with Duvin and local union leadership meeting and discussing possibilities. Offers were then made public and then the company denied them at the table" (McGonagle 1988).

When parties in a negotiation do not get what they want, they always blame someone else. Novice negotiators may even be inclined to blame the mediator. However, McGonagle pointed out, "We don't have the tools to offer anything--only the tools of persuasion" (McGonagle 1988).
In the 1985 dispute, McGonagle's power of persuasion was not sufficient to make the parties agree. From the beginning of negotiations, the parties positioned themselves for a showdown, and given all the divisiveness, there was not much he could do to prevent it from happening.

McGonagle placed the BIW settlement into the context of the bargaining environment during the time frame in which the negotiations took place. In his estimation, the management position of standing firm on demands related back to the demise of PATCO in Reagan's first term in office (McGonagle 1988). One union committee member felt that the political climate in Washington was the key to the company's success. Washington's message seemed to be that it was acceptable to seek wage concessions. "The union believed that anything that went to Washington was lost. We always got screwed after PATCO" (C. Finn 1988). He claimed that "the psychological impact was that big business is okay, and by the way, unions suck" (C. Finn 1988). Another member claimed that, "companies thought they had a carte blanche to drive any contract they wanted" (Ventry 1989). The federal mediator's perspective was that in 1985, "Management was coming in firmly throughout all industries. A final offer was a final offer" (McGonagle 1988).

The Navy

During the course of the labor dispute at BIW, the Navy did not apply any undue pressure on management to settle with the union. The Navy's chief representative at BIW,
Captain Edward Webster stressed that the Navy "goes out of its way not to become involved in strikes. The Navy's position is that we'd like to see the strike resolved as soon as possible, but we do not put any pressure on the union or the management to settle the strike" (Holmes 1985a, 1).

Vice President Bancroft found the Navy to be very careful in their positioning--very correct. According to Bancroft, "It seemed that they followed a script that they had done many times before." However, Bancroft felt that the union never did trust the Navy to be neutral in disputes between management and labor. In his view, "They [the union] had a 'black box' view of government contracting. They saw it as obscure, complex, and tainted with politics" (Bancroft 1988).

If there was any pressure felt by the management it involved the possibility of losing future Navy contracts because BIW could be viewed by the Navy as a shipyard with labor problems. Haggett believed that Secretary of the Navy Lehman "was delighted with what we were trying to do" (Haggett 1988). The Navy wanted to stop wage increases in shipbuilding as part of the effort to curb inflation in weapons systems costs. In Haggett's opinion, "the BIW settlement flattened wage increases in the industry" (Haggett 1988).

A militant member of the union committee expressed disappointment that the Navy did not pressure for a
resolution of the dispute and, in effect, pressure BIW to return the shipyard to work (Ward 1988). Another committee member said that members had faith that if they went on strike, the Navy would apply pressure on BIW to settle. In his opinion the Navy did not pressure the company because the schedule of work in the shipyard did not require production workers in the immediate time period (J. Finn 1988).

In retrospect, the union president felt that the Navy pretty much distanced itself from the dispute and was not very much of a factor. He claimed that, "they seemed truthful when they talked to us" (Ladd 1989). The influence of the Navy on the 1985 bargaining was summed up by the federal mediator.\footnote{The Navy contract office contacted the federal mediator early on in an attempt to find out more about what was revealed by the parties or what was in the press. Being bound by confidentiality, McGonagle could only confirm or deny what was in the press (McGonagle 1988).} He stated, "To my understanding, the Navy didn't appear to have an influence. The Navy doesn't want to be accused of being biased. They must comply with the law" (McGonagle 1988).

In sum, in the 1985 BIW negotiations, the only outside force to impact on the bargaining was the parent corporation. The Congoleum officials' determined stance in pursuit of their agenda made all other outside influences irrelevant. The balance of bargaining power heavily favored the parent corporation, and other potential outside influences did not seriously impact on the negotiations. Because
public sentiment did not matter to Congoleum, the media played a limited role in pressuring the negotiation. With the federal mediator rendered ineffective and the Navy not pressuring to settle, the parties were effectively only influenced by the unseen power at the table, Eddy Nicholson, CEO of Congoleum Corporation.

**Conclusion**

The case study of the 1985 labor dispute reveals several factors which were instrumental in the determination of bargaining power at BIW and which ultimately impacted on the outcome of negotiations. These factors include: the dynamics within each bargaining team; the timing of contract talks; control over access to data; the bargaining tactics used, informal meetings; and, the influence of outside forces.

**Bargaining Teams**

The owners of the parent corporation and its hand-picked labor attorney exercised bureaucratic authority over the company team by virtue of corporate ownership, the personal power they had, and by controlling the decision agenda and process. In short, the company team was well organized and specifically staffed and structured to present a hard line and committed position during negotiations. On the other hand, in addition to lacking the prerequisite experience, the union committee was found wanting along several dimensions of power in organizations.
Timing

The timing of Navy contracts played an essential role in the determination of the balance of bargaining power between the two parties. During the strike, because of the economics of defense contracting, the company not only avoided financial penalty, but may have saved money by not paying production workers during the slack period between major Navy building programs. This is an illustration of how economic factors, as seen in the costs incurred by each party, effect the balance of bargaining power.

Access to Company Cost Data

The issue of access to company cost data played a prominent role in the determination of bargaining power during contract negotiations and became a focal point of the labor dispute. Control of knowledge and information is an important source of power in organizations and the union could have used the data to establish the extent of company profits on future Navy contracts. A standoff ensued when the company maintained that it was under no obligation to share sensitive cost data with anyone. The company's refusal to grant the union access to the company cost data contributed significantly to the imbalance of power in favor of the company by frustrating the union effort to construct a coherent economic argument in their favor.

Bargaining Tactics

When the union went on strike, the company employed effective tactics designed to break the morale of the
striking shipbuilders. First, the company brought back the other striking union locals under the agreement that if they went back to work, they would get the same increase as what the production workers eventually settled for. This tactic had an important psychologically demoralizing effect on the union strikers. Secondly, the company team negotiated will and convinced the union that Congoleum Corporation had the strength and resolve to outlast the union. The company's two-pronged bargaining strategy contributed significantly to its success in the contract negotiations.

In order that the rank-and-file would ratify the agreement, the company again employed two effective tactics. The company offered a $2,000 bonus to returning workers, and the CEO of the firm threatened to open the shipyard to anyone willing to cross the picket line if the agreement was not ratified. Given the length of the strike, this threat seriously jeopardized the existence of the union at BIW. It is clear that the company's bargaining tactics were instrumental in completing the link between the its potential power and the favorable outcome in negotiations.

On the other hand, the union committee was never able to devise and implement effective bargaining tactics which would have enhanced its bargaining power during negotiations. The union lacked the leadership necessary to direct successful negotiating tactics and this contributed significantly to the imbalance of bargaining power in the labor dispute.
Meeting Informally

It was revealed by both parties that during the 1985 contract talks, a large amount of negotiating was conducted "off line" away from the table. Both parties believe that in general, meeting informally during the period of negotiating has the potential for making progress when contract talks stall. However, in 1985, informal negotiations between individuals on the respective teams were seen as disruptive, troublesome and counterproductive.

Outside Forces

The primary outside force to impact on the 1985 bargaining was the parent corporation. Both union and local management officials perceived the owners of Congoleum Corporation as an outside influence not directly tied to the fortunes of the shipyard. Congoleum's determined stance in the pursuit of their own agenda made all other outside influences irrelevant. The negotiating parties were, in essence, only influenced by the unseen power at the table, the CEO of the parent corporation.

In sum, the findings of the qualitative research lead to the conclusion that the outcome of the 1985 labor negotiation at BIW was the result of the influence of several different but related factors. When all of these factors are considered in the context of their influence on the balance of bargaining power in contract negotiations, a picture emerges of a company that would achieve the majority of its negotiating objectives.
CHAPTER VII

ANALYSIS OF BARGAINING POWER

Introduction

In this chapter, three primary theoretical frameworks are employed to analyze the events surrounding the 1985 BIW labor negotiation, strike and settlement. Chamberlain's (1965) theory emphasizes the economic issues of bargaining power, yet alludes to other more subjective criteria. Morgan's (1986) perspective on power within organizations picks up where Chamberlain leaves off and more thoroughly develops the subjective aspects of bargaining power. Bacharach and Lawler (1981) adopt a dependence approach to power perception which first assumes bilateral monopoly in the labor market. The analysis in this chapter concentrates on and seeks to intertwine the elements of economic rationality, subjective interpretations, and dependence theory. Each frame of reference is, in effect, a "conceptual lens." By comparing and contrasting three frameworks, "we see what each magnifies, highlights, and reveals as well as what each blurs or neglects" (Allison 1971, v).

In addition, the discussion of strikes by Reynolds (1982) is employed to identify the cause of the strike in the BIW labor dispute and to understand better the role of
the strike in the eventual settlement. Kochan's (1980) outline of the possible sources of environmental change also is used to explain how changes in the bargaining environment affected the BIW negotiations.

**Basic Bargaining Framework**

Bacharach and Lawler's (1981) dependence theory is appropriate for this study because it relates directly to the theory of bilateral monopoly in the market for labor. In a bilateral monopoly situation, both parties are clearly dependent upon one another. Given the level of capital investment, large shipyards such as BIW cannot easily move. Given the limited high-paying employment opportunities for many shipbuilders outside the shipyard, union negotiators were faced with no alternative other than to deal with the largest private employer in the state of Maine.

In Bacharach and Lawler's theory, dependence refers to the degree that parties have a stake in bargaining. A party's bargaining power increases as the opponent's dependence on the bargaining relationship increases. According to Bacharach and Lawler, the first dimension of dependence, a party's alternatives, are determined by the availability of similar outcomes from other relationships. In the BIW situation, the union was almost totally dependent on the employment opportunities provided by the largest private employer in the state. High-paying job opportunities outside the shipyard for a majority of shipbuilders are limited.
The second dimension of power in Bacharach and Lawler's (1981) theory, a party's degree of commitment to the outcomes at issue, was present to a large degree on both sides of the table. However, rumors of Congoleum's plans to sell the shipyard enhanced the perception of an out-of-state corporate parent not fully committed to the long-term fortunes of BIW. This imbalance of perceived commitment probably served to increase the company's potential bargaining power.

Two of Morgan's (1986) sources of power in organizations also can be employed to understand better the basic structure of the bargaining environment in the BIW labor dispute. Congoleum officials exerted control over the company team in the labor negotiations by virtue of their possession of formal authority. In the case of BIW, power resided with Congoleum Corporation executives through legitimate authority that comes from the rule of law. The owners of the privately-held parent corporation possessed ownership rights to BIW and exercised control over local management during the negotiations by virtue of these rights.

In addition, Congoleum exercised strict control of the labor relations office. Morgan (1986) identifies this source of power in organizations as control of boundaries. In the case of BIW, officials of the parent corporation had a definite agenda, and insuring that full attention was paid to it required the restructuring of the company negotiating
team to include key individuals more receptive to the goals of the owners of Congoleum Corporation. Related to this restructuring at BIW were the steps taken in 1985 on the part of the parent corporation to exercise control over and diminish the influence of the company labor relations office. As a consequence, the director of labor relations played a much lesser role in the 1985 negotiations than he did in the previous two contract settlements.

Movement Along the Range of Indeterminacy

Bargaining power in situations of bilateral monopoly in the labor market determines the position of the contract settlement along the range of possible outcomes. In addition, bargaining power in labor negotiations can be viewed as having both an economic component and a more subjective component.

Economic Perspective

Chamberlain's (1965) theory of bargaining is well suited to analyze the factors which determined the outcome of the BIW labor dispute. There was a rational economic dimension to the determination of bargaining power in the contract negotiations. Chamberlain's theory allows us to understand how a continual assessment by each party, of the ratio of the costs of agreeing to the costs of disagreeing, can lead to a contract settlement. In the case of BIW, with the economics of the defense industry in mind, officials of the parent corporation pursued tactics designed to make the
union's costs of agreeing less than the costs of continuing to disagree with the company's terms.

According to Chamberlain's (1965) theory, in order to improve the outcome by moving along the range of indeterminacy, a party in collective bargaining must either: (1) increase the cost (both monetary and non-monetary) of continuing to disagree with its terms; or (2) decrease the cost (monetary and non-monetary) of the other party agreeing to its terms. The following outline, based on Chamberlain's (1965) framework, details the attempts of each party to move the settlement along the indeterminate range in their favor.

**Company: Bath Iron Works**

**Attempts to Increase the Union's Cost of Disagreeing**

**Monetary.** The company's CEO threatened to open the shipyard to those willing to cross the picket lines if the proposed contract was not ratified. Given the length of the strike and the dissention from within the union committee, this presented a serious threat to the survival of the union.

**Non-monetary.** First, the other union locals were brought back off strike under the agreement that if they went back to work, they would get the same terms as what the shipbuilders eventually settled for. Second, the media campaign used newspaper advertisements to tell the "BIW Story" of increased competition in the shipbuilding industry requiring wage concessions. Third, the company bargainers
adopted a confident attitude. The leadership on the company team well understood the advantage of Congoleum's vast resources and they also did not hesitate to negotiate on the basis of company resolve.

**Attempts to Decrease the Union's Cost of Agreeing**

**Monetary.** The $2,000 cash bonus over the life of the contract significantly decreased each member's cost of agreeing to the company's terms and definitely helped to ensure that the proposal would be ratified by the union membership.

**Non-monetary.** Initially, there was no substantial effort due to a hard-line bargaining stance. Then the company's CEO used letters sent directly to the union membership.

**Union: Local 6, IUMSWA**

**Attempts to Increase the Company's Cost of Disagreeing**

**Monetary.** When the old contract expired without reaching a settlement, the union immediately went on strike. Picket lines were established at the two major work sites. Local 6 received financial and moral support from other unions in the state and from the national shipbuilders' union.

**Non-monetary.** The union conducted a very effective media campaign to portray a picture of corporate greed on the part of the parent corporation, Congoleum. Since the company was doing very little talking to the press, the
union was able to obtain media coverage of its version of what was transpiring at the negotiating table.

**Attempts to Decrease the Company's cost of Agreeing**

*Monetary.* The union could have promised more cooperation with management in the event of a favorable contract. The union also could have made a case for increases in productivity that come with high morale following a favorable labor contract. However, because negotiations quickly evolved into an impasse, no promises of cooperation or increased productivity were forthcoming.

*Non-monetary.* The union did control the radical element on the picket lines so that there were no incidents of violence or destruction of company property during the strike. However, the national union could have stepped in earlier to fill the leadership vacuum at the local level. This might have brought the labor dispute to a quicker resolution.

In sum, from an economic perspective, when the attempts of either party to change the other party's cost ratio are totalled, the company team was more effective in both increasing the union's cost of continuing to disagree and decreasing the union's cost of agreeing to its terms. This imbalance of economic costs (monetary and non-monetary) led to a settlement closer to the company wage on the range of indeterminacy.

Chamberlain's (1965) theory of bargaining power, although applicable to the BIW settlement, is limited by the
view that costs of agreeing and disagreeing are defined in terms of economic rationality. However, Chamberlain mentions the more subjective notion of all the circumstances which surround bargaining as being important to the concept of bargaining power. Therefore, Bacharach and Lawler's (1981) dependence theory, and Morgan's (1986) perspective on power in organizations, are utilized as a lens through which to view the issue of bargaining power in the BIW negotiations.

**Subjective Power**

Bargaining power in contract negotiations also has a subjective element, as the outcome to a large extent, depends on specific tactical actions such as threats, bargaining toughness and so forth. In the 1985 BIW negotiations, the company team was led by a professional labor attorney entirely capable of employing tough bargaining tactics to achieve the company's negotiating goals. The effect of the parent corporation's control was to shift bargaining power in favor of the company team.

Since Bacharach and Lawler (1981) assume that bargaining power is subjective power, in their theory the perception of power is a crucial theoretical and empirical issue. The company team was well aware of the importance of impression management. For example, the labor attorney indicated to the union that they could have a strike of four weeks or forty weeks, and the results would be the same. In addition, the company threatened to open the shipyard to any
worker (including union members) willing to cross the picket lines. This alternative could have broken the union and served to enhance the company's bargaining power toward the end of the strike.

The key to the company team's negotiating success was that it was able to tap into more than one dimension of power. They were able to bring to bear on the conflict both economic pressure and more subjective dimensions of power. For example, the strategy of bringing the other union locals back from strike certainly had a negative influence on the morale of the striking shipbuilders. In the case of the BIW negotiations, the company team also was aware of the dimensions of dependence, and they were used when formulating broad tactical decisions. In Bacharach and Lawler's (1981) terms, the company's tactics completed the link between the its potential power and the favorable bargaining outcome. On the other hand, some union officials were cognizant of the nature of dependence, but the committee was not capable of translating the abstract concept into an estimation of each party's power, and they never did make unified broad tactical decisions.

Morgan's (1986) sources of power in organizations also can be used to understand the concept of subjective power in the BIW negotiations.

Control of Knowledge and Information. With regard to Morgan's (1986) dimension of power, control of knowledge and information, the company team clearly was able to control
access to its labor costs data. At BIW, the issue of access to company cost data became a significant disruptive factor which dominated the negotiating agenda before and during the strike. The company team was able to successfully thwart the union attempts to acquire the sensitive information and the union was not able to effectively use this data to its advantage in the bargaining process.

**Control of Informal Organizations.** One of Morgan's (1986) dimensions of power in organizations is the control of "informal organizations." In general, when members of each party meet informally during the period of contract negotiations, there exists the potential for making progress when bargaining has stalled at the table. In the BIW negotiations, neither party was able to exploit the potentially important source of power as the dissention on both teams made informal meetings counterproductive.

**Use of Organizational Structure, Rules and Regulations.** Morgan (1986) points to the use of organizational structure, rules and regulations as a primary source of power in organizations. The company team simply included individuals with the bargaining experience and expertise to use the rules and regulations to their advantage in bargaining. For example, the director of labor relations took detailed notes of each negotiation in order that his version of events could be called upon in the event of a later dispute.

In sum, if the tactics of both parties are compared along Morgan's dimensions of power, it is evident that the
company bargaining team was at a distinct advantage as it was able to successfully tap into more than one source power in organizations.

**Changes in the Bargaining Environment**

The dynamics of change in union-management relations and the factors that facilitate or impede the change process are important determinants of the outcome of the contract settlement under collective bargaining. Changes in the bargaining environment affect the framework under which bargaining takes place and impact on where the settlement falls along the range of indeterminacy.¹

Kochan (1980) indicates that some of the possible forms of environmental change that can effect employment are: (1) the development and implementation of new technology for performing work; (2) changes in market conditions which pressure parties to modify the terms of the labor contract in order to avoid losing jobs to competitors; (3) changes in public policies regulating the employment relationship; and (4) changes in the attitudes and expectations of workers which may create internal pressures on union and management leaders.

¹ For example, Kochan, Katz and McKersie (1986) claim that the early 1980s witnessed a significant change in the U.S. system of collective bargaining and industrial relations in which labor concessions departed from the pattern of improved wages, fringe benefits, and job security to which the American public in general and union members in particular had become accustomed.
New Technology

The introduction of modular "zone" production techniques beginning in the late 1970s allowed much of the work to be performed indoors. This change ensured a more constant size of work force throughout the year in the northern climate and helped the shipyards to compete with southern shipyards which can build ships all year long. In addition, the increased productivity associated with this new production technology threatened the union with a reduction of production workers. This threat impacted on relative power at BIW to change bargaining power in favor of the company.

Changes in Market Conditions

There were significant changes in market conditions in the time period following the previous labor settlement at BIW in 1982. The increase in foreign shipbuilding competition combined with the end to federal shipbuilding subsidies contributed to the subsequent overall decline in the U.S. shipbuilding industry in the 1980s (see Chapter V). The company seemed more aware of these market realities and their potential impact on the shipyard than either the union leadership or the union rank-and-file. In the middle of the BIW labor dispute, these changes were brought closer to home with the announcement of the closing of the General Dynamics shipyard in Quincy, Massachusetts. These changes in market conditions had a decided impact on relative power in favor of the company position.
Changes in Public Policy

During the early part of the 1980s, the defense budget peaked and a roll-back in military procurement after 1982, ended plans for a 600-ship Navy. Policy changes instituted by Secretary of the Navy Lehman in the early 1980s included increased emphasis on second source contracting and more overhaul work being awarded to federal shipyards. The effect of these changes was increased competition for Navy contracts, the only domestic shipbuilding work available. In addition, the Navy's policy of not penalizing a defense contractor for late delivery due to a labor dispute made the strike a potential weapon of management. The changes in Navy policy had the effect of influencing relative power at BIW in favor of the company position.

Once again, management was more aware of these policy changes and the implications for the long-term fortunes of BIW. The union seemed wedded to the viewpoint that they worked for a prosperous company that was completing a very profitable frigate shipbuilding program, and which had a backlog of orders to build Navy ships. The union's response to company claims of increased competition in the industry was to conduct a media campaign based on a theme of "corporate greed."

Changes in Attitudes and Expectations

The union had become accustomed to substantial increases in wages and benefits as a result of generous contracts negotiated in the three previous contracts. Even
though the union presented modest demands to the company, they did not have the strength to realize their objectives. Although the company asked for significant reductions in labor costs, their strong will and determination provided the necessary bargaining power to achieve their goals.

The local BIW management officials saw the negotiations taken over by representatives of the parent corporation, Congoleum. The owners of the parent had their own agenda which involved the sale of the shipyard to another outside investor. There was a definite change in attitude toward the workers in the shipyard when Congoleum's hand-picked attorney instituted hard-line bargaining. This change also impacted on the relative power between the company and the union in favor of the company.

In sum, when the changes in the bargaining environment prior to the 1985 negotiations are considered in total, they can be seen as having a decided impact on relative bargaining power between parties at BIW in favor of the company position.

Role of the Strike

According to Chamberlain's (1965) theory, each bargainer evaluates its bargaining attitude at each stage of negotiations as the ratio of the cost of disagreeing with its opponent's current offer by holding out for its own, to the cost of agreeing by immediate acceptance of the offer. The attitude ratio of each party will undergo change as
negotiations proceed, according to each party's demands, and the bargainers are assumed to be cost minimizers, and therefore each will accept the current offer when its attitude ratio is greater than, or equal to, 1 and otherwise reject it in favor of continued pursuit of its own objectives. In cases where both bargainers' ratios are less than 1, a strike will occur. In the case of BIW, the impasse arose because for both sides, the costs of agreeing to the other's terms exceed the cost of disagreeing.

Reynolds (1982) outlines several reasons why unavoidable strikes may occur, including: (1) the framework of bargaining, (2) a positive value to the strike, (3) a matter of principle, (4) institutional constraints, and (5) misjudgment of costs of disagreeing. In the BIW labor dispute several of these reasons for unavoidable strikes were present and contributed to membership of the union voting to go on strike.

Framework of Bargaining

Reynolds (1982) claims, "one party may decide that the time has come to force a change in the bargaining framework that will improve its bargaining position in future years" (428). Over the course of the three previous contracts, the union had become accustomed to receiving substantial increases in wages and benefits. The company may have seen the strike as a very emphatic way to indicate a major change in the framework of bargaining.
Positive Value to a Strike

In the BIW labor dispute, the absentee owners of the privately-owned parent corporation directed the management negotiating team to take a position that had a high probability of leading to a strike. The absentee owners may have felt that a prolonged strike could have broken the union in the shipyard. However, the hard-line position of the management team was not fully supported by all local BIW negotiators.

A Matter of Principle

The common sentiment among workers in the shipyard was that if BIW was calling them the best shipbuilders in the world, then why were they asking them to work for less? The concessions demanded of the work force of a profitable company, somehow clashed with the "Downeast" sense of fairness and tradition of a fair day's pay for a fair day's work. In its entirety, the company's concessionary proposal was unacceptable to the majority of the members of the union simply as a matter of principle.

Misjudgment of Costs of Disagreement

In the BIW negotiation, the union definitely misjudged the company resolve to obtain a favorable contract. The union was simply overmatched with the arrival of the professional labor attorney on the company team. In this case, the union underestimated the determination of the employer to obtain wage and benefit concessions. The union could not have anticipated a fourteen-week strike and it could not
have anticipated the total costs to its members of continuing the strike for so long.

In addition, some members of the union fully expected the Navy to intervene in the event of a protracted strike and force the company to negotiate a reasonable contract. However, a change in Defense Department policy in the 1980s left the Navy remaining "neutral" during the labor dispute, not penalizing the company for late delivery.

In sum, when the BIW strike is viewed from the perspective of Reynolds' reasons why unavoidable strikes may occur, it is evident that a strike in the 1985 labor dispute was not only inevitable, but after fourteen weeks, it only tended to increase the company's leverage in contract negotiations.

Conclusion

In the case of the 1985 BIW labor dispute, many of the elements of the bargaining power theory of Chamberlain (1965), the power in organizations theory of Morgan (1986) and the dependence theory of Bacharach and Lawler (1981) were present. Changes in the basic bargaining environment made the union more dependent on the company than the reverse, and served to enhance the company's bargaining power. The company was able to achieve the majority of its negotiating objectives in the 1985 labor settlement. The company was successful in making the union agree to a majority of its terms, to a large degree, due to: (1) its
exercise of power derived from formal authority; use of organizational structure, rules and regulations, and the control of information; "informal organization" and boundaries; and, (2) employment of bargaining tactics designed to lower the cost of agreeing and raise the costs of continuing to disagree.

Following the settlement, company officials seemed pleased with the outcome. However, even though a majority of the union members voted to accept the settlement, there was a feeling that the concessions would impact on the future morale and productivity in the shipyard. A discussion of the condition of shipyard morale, effects on productivity, labor-management relations, and other events at BIW subsequent to the 1985 contract is provided in Appendix B.
CHAPTER VIII

CONCLUSIONS AND IMPLICATIONS FOR UNIONS AND MANAGEMENT

Introduction

A review of 150 years of literature on the theory of bilateral monopoly, especially as it applies to the market for labor, reveals that wages under conditions of bilateral monopoly are indeterminate along a range in which the outcome of negotiations may fall. The aim of this dissertation is to identify what factors affect the position of a contract settlement along the range of indeterminacy in the bilateral monopoly model. The research methodology is to explore the model of bilateral monopoly with two different, but equal approaches: (1) an ethnographic case study of a negotiated wage settlement, which corresponds with research from the inside; and (2) an econometric model of wage-rate determination, which corresponds with research from the outside. By including both qualitative and quantitative methods of research, a clearer picture emerges of how well the bilateral monopoly model applies to the determination of wages in the U.S. shipbuilding industry.

In this thesis, a model of wage-rate determination was developed from the literature and from case study data. Conditions in the labor market affect the supply and demand for shipyard labor, and therefore, help to establish the boundaries on the range of indeterminacy. On the other
hand, the factors which influence the bargaining environment help to establish where the outcome of negotiations will fall along the range of possible outcomes. The econometric model also formed the foundation of a number of issues which needed to be addressed in the form of an ethnographic case study of one contract settlement in the shipbuilding industry.

Ethnographic case studies are particularly well suited to examine the events of an adversarial situation such as the labor dispute at BIW because the methodology requires investigation of both the union and the management perspective. The case study revealed a number of variables which could be included in the econometric model, and which contributed to its explanatory power. The case study also revealed a number of factors which were instrumental in the determination of the final outcome of contract bargaining which cannot be adequately reduced to a measurable form. Ethnographic case studies inform econometric models by revealing social and psychological factors which are not suggested by economic theory.

Econometric Model

The literature on wage-rate determination formed the basis for the quantitative research found in Chapter IV in this study. This study is in part a response to de Menil's (1971) call for further studies of bilateral monopoly based on microeconomic data. The results of the quantitative research in this study support de Menil's (1971) findings
that in order to examine labor settlements under conditions of bilateral monopoly, models of wage-rate determination must account for influence of bargaining power.

The primary findings of the econometric model of wage rate determination in shipbuilding are:
(1) comparative wages in the labor market have a significant impact on the final settlement; (2) past increases in the regional cost-of-living influence the level of union demands; and (3) the bargaining environment exerts a significant influence on the determination of negotiated wage rates along the range of indeterminacy found in the bilateral monopoly model.

More specifically with regard to the bargaining environment, it was found that wages throughout the industry tend to move toward the industry-wide average. In addition, a variation on the model indicates that firms may be more effective in limiting wage increases when the firm's wages are above the industry average than the union is effective in obtaining large wage increases when the firm's wages are below the industry average. The estimated results also indicate that union negotiators look to past wage increases as a measure of what they expect to receive in current negotiations.

Another variation of the regression model examines the possibility of a change in the negotiating climate for contracts settled in the 1983-87 time frame. The estimated results indicate that all explanatory factors being equal, a
definite change in the pattern of shipyard wage settlements occurred after 1983 and had an adverse effect on the wages and benefits of U.S. shipbuilders.

**Ethnographic Case Study**

The case study of the 1985 labor dispute reveals several factors which were instrumental in the determination of bargaining power at BIW and which ultimately impacted on the outcome of negotiations. These factors include the dynamics within each bargaining team, the timing of contract talks, the control over access to data, the use of bargaining tactics, the inclination for informal meetings, and the influence of outside forces.

**Bargaining Teams.** The company team was well organized and specifically staffed and structured to present a hard line and committed position during negotiations. On the other hand, in addition to lacking the prerequisite experience, the union committee was found wanting along several dimensions of power in organizations.

**Timing.** During the strike, because of the economics of defense contracting, the company not only avoided financial penalty, but may have saved money by not paying production workers during the slack period between major Navy building programs.

**Access to Data.** The company's refusal to grant the union access to the company cost data contributed significantly to the imbalance of power in favor of the company
by frustrating the union effort to construct a coherent economic argument in its favor.

Bargaining Tactics. The company successfully employed several bargaining tactics which increased the union's cost of disagreeing with its terms. First, the company brought back the other striking union locals. Second, the company team demonstrated strong will and convinced the union that the parent corporation had the strength and resolve to outlast the union. Third, the company engaged in a newspaper advertisement campaign to tell the "BIW Story." Finally, the company's CEO threatened to open the shipyard to those willing to cross the picket lines if the proposed contract was not ratified. With regard to decreasing the union's cost of agreeing, the $2,000 cash bonus over the life of the contract significantly decreased each member's cost of agreeing to the company's terms.

In addition, the company team also was able to tap into several of more subjective dimensions of power in organizations. The successful company bargaining tactics completed the link between potential power and the bargaining outcome.

On the other hand, the union committee was never able to devise and implement effective bargaining tactics which would have enhanced its bargaining power during negotiations. The union responded to the company offer by going on an ineffective fourteen-week strike which only served to place financial hardship on the union.
Meeting Informally. In 1985, informal, off-line negotiations between individuals on the respective teams were seen by both parties as disruptive, troublesome and counter-productive.

Outside Forces. The negotiating parties were, in essence, only influenced by the unseen power at the table, the CEO of the parent corporation.

In sum, when the factors which influenced the balance of power in the BIW labor dispute are examined in the context of economic costs, subjective interpretations of power, dependency theory, and sources of environmental change, a picture emerges of a company that would achieve the majority of its negotiating objectives.

Implications for Unions and Management

Unions

Given the unfavorable outcome of the 1985 negotiations, several recommendations are made about how the union should prepare for and conduct future labor negotiations.

1. The union was not able to gain assistance from the NLRB in their quest for company cost data. The NLRB did not rule on a union charge of "unfair labor practice" for the duration the strike and also would not force a court order to have the company release cost data.

In the short term, given the present political climate and disposition toward organized labor in the NLRB and in the courts, when a company presents severe concessionary
demands at the time of contract renewal, the union is left with few real options other than to negotiate the best deal that it can, and settle quickly. The adverse effect of wage concessions can be ameliorated by holding the line on benefits and work rules. Profit sharing and employee stock ownership plans negotiated during concessionary bargaining will most likely favor the owners of company.

2. Following the ratification of the contract, the officers of the union spread the word that the contract was a bad one for the union and soured the rank-and-file on the settlement. The union officers seemed determined to prove their prediction that a concessionary contract would lead to low morale in the shipyard.

Once the settlement is ratified, it is counterproductive for the union leadership to "badmouth" the settlement as this only serves to cause resentment and morale problems throughout the work force. Instead, it would be preferable for the union leaders to indicate that increased competition forced the harsh terms of the settlement, it is the best the union can do, and the issue of long-term survivability of union jobs was uppermost in the minds of negotiators. With proper selling, union negotiators don't have to appear to be failures following a concessionary labor settlement.

3. Because bargaining quickly evolved into an impasse, no promises of cooperation were made by the union. In addition, the union failed to emphasize high rates of past
productivity as an indicator of what could be expected in the future.

In the long term, unions can adopt a more cooperative stance toward management productivity goals and emphasize the need for the firm's viability in order to ensure a long-term place of employment.¹

4. The majority of the union committee, including the union president, who served as chief spokesperson, lacked any negotiating experience and bad dynamics on the union committee compromised its effectiveness.

The union should identify and encourage candidates for the elected negotiating committee positions who have experience and the prerequisite skills in labor negotiations. Some limited training for novice union negotiators also would be of great benefit. In addition, the president of the union does not necessarily have to be the chief spokesperson for the union negotiating committee. Furthermore, if the local union members cannot effectively interpret comparative wage data or the firm's financial data, then they should hire consultants who can.

5. Two years prior to the BIW negotiations, another local of the IUMSWA signed an early concessionary contract with Ingalls Shipyard, the company's main competitor.

¹ Reading about the closing of a competitor's facility has a certain effect on the attitude of striking workers, but the researcher's visit to the all-but-empty union hall at the closed Quincy shipyard had a much more visceral, gut-wrenching impact than any newspaper account provided.
As far as the national union is concerned, when negotiating labor contracts in firms which compete directly against one another, avoiding the first concessionary contract should be of primary concern. Once a single firm is able to establish a comparative advantage on the basis of lower labor costs, all other competing firms will tend to follow the trend and attempt to compete on the basis of wage concessions.

Management

Insofar as there is a strong potential for a precipitous decline in the morale and productivity of the work force following a concessionary contract, four recommendations are made concerning the way future contracts are negotiated.

1. The company tried four times to re-open contract talks over a two-year period prior to the summer of 1985. The company should not ask the union to negotiate early, years before the expiration of the present contract. Failed early negotiations can seriously jeopardize credibility.²

2. The parent corporation brought in a professional labor negotiator who devised tactics necessary to obtain a labor contract consistent with short-term corporate goals. Management should not bring in an outside labor attorney to direct the company's negotiating effort. It has the

² In an article on employee concessions, Harvard Business School Professor, D.Q. Mills (1983) recommends that "firms should first try to minimize new costs when an existing contract expires" (106).
potential to cause resentment on both local negotiating teams. The company should keep the same team in place and deliver a sincere and consistent message.

3. As the negotiations proceeded toward the expiration date of the previous contract, the company proposal demanded significant concessions on wages, benefits and work rules. Company negotiators should not be so severe in insisting on concessions across the board which impact on several areas of the contract. Both sides can live with a wage freeze and then settle other items individually. If a substantive change such as the relaxation of work rules is introduced during bargaining, then the company must make sure that the benefit is worth the effort to get the union to agree to the change.

4. The rank-and-file members of the union were never convinced that the company's ability to compete for future Navy contracts depended on wage concessions. Management should go directly to the union membership and educate them about the increased level of competition within the industry. The company should engage in a substantial effort to "condition" the workers to accept the contract settlement given the realities of the marketplace. However, if the union leadership is not convinced of the validity of the company's argument, then the membership probably will not be convinced either.
Directions for Future Research

Future research on wage-rate determination under conditions of bilateral monopoly in the market for labor can confirm and expand upon this study by following de Menil’s call for more studies of unionized wage rates based on microeconomic data. Unfortunately, as a result of the budgetary cutbacks at the Bureau of Labor Research it will be increasingly difficult to obtain a sufficient number of labor contracts to conduct quantitative research. In addition, if such a task is attempted, more robust results are anticipated if an industry is chosen in which data on each firm’s productivity and internal cost ratios are available. A proxy for the firm’s elasticity of demand for labor could contribute to the explanatory power of the model. Econometric models of wage-rate determination would better explain wage changes if firm-specific data were available on the short-run demand for production labor at the time of contract negotiations.

With regard to expanding the qualitative investigation of labor contracts in the shipbuilding industry, an ethnographic case study of a contract settlement at Ingalls shipyard, the main competitor of BIW, would provide a more complete picture of wage settlements in this highly competitive industry. For example, it would be instructive to determine the factors which impacted upon the 1983 early settlement between Ingalls and the IUMSWA, which was the first major concessionary contract in the industry.
In addition, a follow-up ethnographic case study at BIW of the long-term effects of the 1985 settlement would provide a more complete picture of the consequences of a concessionary labor contract than that provided in Appendix B. Such a case study also would benefit from interviews of Navy personnel concerning the details of their policy on awarding shipbuilding contracts.

This dissertation has focused on the determination of bargaining power in contract negotiations between management and unions in the U.S. shipbuilding industry. In this study, both quantitative and qualitative methodologies were utilized to identify those factors which influence the final outcome of labor contract settlements. The most significant and rewarding aspect of the research process was the successful integration of the two methodologies. The results of this research offer important information about how the dynamics of bargaining power can affect collective bargaining. These findings in the shipbuilding industry may well apply to other industries where conditions exist that approximate bilateral monopoly in the market for labor.
APPENDIX A

A CHRONOLOGY OF THE 1985 LABOR DISPUTE

AT BATH IRON WORKS
A SEASON OF DISCORD: THE 1985 LABOR DISPUTE
AT BATH IRON WORKS

Strike Two Years in the Making

Over a two-year period prior to the expiration of the 1982 contract in the summer of 1985, BIW tried four different efforts to re-open bargaining. The emphasis of these efforts was to reduce labor costs. The chronology of events is what follows.

In September, 1983 Haggett wrote to employees explaining that he was "stunned" by the reduction in wages at its main competitor, Ingalls Shipyards and that BIW "must react quickly to this new Ingalls challenge" as the Navy prepared to take bids on Aegis cruisers and the lead Aegis destroyer. He asked the union to re-negotiate its contract but added, "No one, however, will be asked to take a pay cut" (Allen 1985, 2).

In October, 1983 after the union's refusal (opening of Congoleum's books was the key stumbling block), Haggett again wrote to employees saying he was misunderstood and he only wanted to re-open talks. Claiming that he was willing to consider a profit-sharing plan as well as increases in fringe benefits, he added, "I... strongly support honest and proper collective bargaining" (Allen 1985, 2). The union again refused to re-open contract talks.

In the summer of 1984, Haggett initiated the BIW 1984 Competitive Challenge, a detailed presentation of
competition in shipbuilding to all union employees. Haggett said, "the risk of losing two new major Naval construction awards was high," without union concessions (Allen 1985, 3). At that time, he was still talking about profit sharing and the union voted to re-open talks. Ray Ladd had just recently become president of Local 6, and he claimed that Haggett wanted to complete the negotiations in three days (Ladd 1989). BIW not only wanted a wage freeze, they wanted to reduce health benefits, reduce shift incentives, pay new employees $3 an hour less, and allow supervisors to "work with the tools." At this point the union negotiating committee rejected the company offer and offered instead to extend the existing contract for two years. The company said no (Allen 1985, 3).

In the fall of 1984, Haggett tried one more time, even extending a bonus to workers for simply signing the contract. The union, claiming that Congoleum was not answering the questions they posed on labor costs, rejected the offer by a 10 to 1 vote. When interviewed, Ladd indicated that the company's final offer would have been acceptable to the union in July of 1984 or even in June of 1985 if it were not for the bad feelings over Congoleum (Ladd 1989).

The 1984 attempts to open negotiations before the expiration of the contract was a "debacle" in the opinion of Steve Wilson, the director of labor relations office. The BIW team, led by Haggett, established goals in the 1984
negotiations which went way beyond their own internally
developed set of objectives. On June 11, 1984, BIW present-
ed a low offer and "lost credibility." Two weeks later the
company offered what Wilson thought should have been offered
first. Throughout a bungled series of negotiation offers,
the company kept incrementally adding more. This questiona-
ble negotiating tactic was in Wilson's words not only "a
real bad idea . . . the 1984 talks were the set-up for 1985"
(Wilson 1988).

When the relatively modest terms were overwhelmingly
voted down by the union in 1984, the owners of Congoleum
were relieved (Ladd 1989). When serious negotiations start-
ed toward the end of contract period, the corporate owners
of BIW took over the negotiations as a practical matter.
BIW replaced chief negotiator Robert Smith with Ronald
Bancroft, a new senior vice president chosen by Congoleum.
It was at this time that Robert Duvin, a Cleveland labor
attorney made his appearance on the management team. Duvin
walked in the first day and said "I work for Congoleum."
There was anger from the opening whistle, worse than Duvin
had ever seen (Duvin 1988).

An executive memo was leaked to the union in early May
that called the union leadership "irresponsible" and "in-
competent". The memo seemed to be written as much for union
consumption as for management. Haggett also seemed to be
talking tougher, at least in public. He told the Maine
Sunday Telegram, "There may be a long work stoppage, but in
the final analysis, we'll get what we need" (Lannin 1985, 46A). Haggett also stated, "The company is prepared for a lengthy strike if that's what's necessary. There is no other choice. We need to make concessions. Otherwise, we're going to be out of business" (Clendinen 1985, 7).

The original BIW contract proposal called for a 10 percent across-the-board pay reduction and no talk of profit sharing. BIW also demanded permanent two-tier wages, changing to a medical insurance comprehensive care plan and cross-trading of jobs. Because the parties were so far apart in the initial stages, there was no real room for rational moderate persuasion. The union's position, which was not unreasonable in terms of their perception, was that they turned down the 1984 offer by an enormous margin and now Congoleum was telling them they wanted four times as much in terms of concessions.

Duvin believed that the union never took the company seriously up until the day before the strike. In his opinion, the union believed that the company position would be that which was offered the previous year and they were waiting for management to bring it to the table. During the last two days of negotiating, when the union found out that BIW's offer was a serious one, in Duvin's words, "they just went crazy" (Duvin 1988).

When the management demands were presented, the union had no option but to turn down the offer and call for a strike. The union president was elected to his position in
part by getting the 1984 offer rejected. He was outspoken saying that the union should and could get more than what was offered a year earlier. "Our strategy was to not accept concessions. We knew we were going on strike" (Ladd 1989). According to Duvin their attitude was, "you must be f... [expletive] crazy if you think we are going to give you a settlement four times as punishing as the one they turned down a few months before" (Duvin 1988). The union was simply not prepared to grant substantial concessions to a profitable company without promise of anything in return. "Congoleum is trying to hitch its star to a nationwide trend toward labor concessions," asserted Jonathan Reitman, an attorney for Local 6. "If a profitable company like this can squeeze concessions out of workers, others will try to do the same. This is one place where labor has to take a stand." (Stipp, 1985, 6) In Duvin's opinion, it was not unlike a lot of concession negotiations where one side is looking for increases and the other side is looking for decreases and the parties are at an impasse on the first day of negotiations (Duvin 1988).

With a bargaining session scheduled for the morning of June 27, union negotiators had to cool their heels along with the federal mediator while Haggett and Duvin conferred with Congoleum executives in Portsmouth, N.H. (Allen 1985). When the union tried to talk with V.P. Bancroft, the word came back from Portsmouth that no bargaining was to take place without Duvin. When Haggett and Duvin returned, they
sent the "final offer" to the union through the mediator (Allen 1985).

The final company offer consisted of a pay freeze at the current pay level, the hiring of new employees at $3 an hour less than current workers, changing to a comprehensive care plan with an annual $750 deductible for individuals, $1,500 for families, and unlimited cross-trading of jobs at the company's discretion. The top company officials envisioned the offer as one in which the union would accept the pay freeze in exchange for a substantial increase in future shipyard employment. However, the union perception was that it was being asked to sacrifice at the same time the corporate owners were rich and getting richer. Accordingly, on June 30, Local 6 voted approximately 4,000 to 25 to go on strike (Allen 1985).

**Why the Strike Was Not Avoided**

**Company Perspective**

Given the preceding events, what were the key factors which led to the strike? Top management of the company felt that they simply could not convince the union leadership of the need for concessions. Haggett felt, "They couldn't understand how a profitable company would seek concessions" (Haggett 1988).

The director of labor relations, Steve Wilson, who served as chief negotiator for the company in the two negotiations prior to 1985, believed that the history of labor-
management relations made the strike inevitable. Wilson pointed out, "in '76 we gave $2.12 over three years; '79 was a giant grievance process with no strike, but a paid week off to sign by only a 60-40 vote; '82 saw $2.50 and many pot sweeteners and it passed by only 400 votes" (Wilson 1988). It is clear that union members had become accustomed to substantial pay increases while not giving a clear indication that they were satisfied with their share, given the level of company profits.

Wilson attributed the strike to three factors: (1) the generous $2.50 settlement in 1982, (2) the bungled 1984 attempt to open talks, and (3) the severity of the management positions (Wilson 1988).

Well-entrenched positions make it much harder to reach compromises that lead to an agreement that is satisfactory to both parties.\(^1\) In the BIW situation both sides spent a great deal of time positioning themselves for a showdown. In the months prior to the expiration of the contract, both the company and the union adopted positions that made a protracted labor dispute all but inevitable. Upon review of the interview data, it was apparent that the entrenched positioning of both parties resulted from a wide divergence in viewpoints and mismatched negotiating goals.

\(^1\) Bob Campbell of the Industrial Relations Office of the Portsmouth Navy Yard has all parties identify interests instead of adopting positions that they cannot easily back down from during the course of negotiations (Campbell 1988).
Competition in the Shipbuilding Industry

The other factor that sheds light on the context under which the bargaining took place was the intense competition in the U.S. shipbuilding industry. Because of the increased competitiveness in bidding for Navy shipbuilding contracts, the management of BIW became committed to the position that a reduction in average wage costs was necessary if the company was to stay in business. The top management viewed the total wage and benefits package as high by industry standards and felt that without favorable wage contracts, the long-run future of the shipyard would be in serious jeopardy (Haggett 1988).

The end of government subsidies to shipbuilding, the increased use of federal shipyards for overhaul work, the reduction in the number of new Navy shipbuilding contracts and the emphasis on cost-cutting by Secretary of the Navy Lehman were realities in 1985 that could not be ignored by BIW management (Haggett 1988). These realities were brought closer to home during the strike when the General Dynamics Shipyard in Quincy, Massachusetts announced it was closing its doors (Mohl 1985).

In the words of company president William Haggett, "The issue is, how do you compete in an industry where contracts for ships run four years?" (Haggett 1988). Its primary competitor, Ingalls shipyard had a head start on BIW since it was awarded the contract for the lead ship of the guided missile cruisers. Ingalls also enjoyed lower average wages,
fringes and overhead along with a more spacious shipyard layout and more favorable weather for optimum production. Haggett believed BIW could "beat" them only if productivity improved and BIW wages were kept close to wages at competing shipyards² (Haggett 1988).

In fact, data from the econometric model of wage-rate determination in the shipbuilding industry shows that in the years prior to the 1976 and 1979 contracts, wages for first class mechanics at BIW were only 87 percent and 86 percent respectively, of the industry average. However, the year prior to the 1982 contract, BIW wages had increased to 95 percent of the industry average. By the year before the 1985 labor dispute at BIW, wages exceeded the industry average by .04 percent.

Even though he had only been with BIW for one year, in the opinion of V.P. Bancroft, "the company had gotten fat with the frigate program" when the only competition was with Todd, Los Angeles which experienced high wage rates of $13.50 per hour (Bancroft 1988). During that contract, management was not pressed to look hard at wage increases. The director of the BIW labor relations office admitted that "with the frigates, the yard was on automatic. They could have been built without management" (Wilson 1988).

² Haggett indicated that on the cruiser contracts, paying $1.00 per hour less in wages translates into about $4 million per ship in company profits (Haggett 1988).
problem-free contract translates into high rates of profits for the shipyard.

Vice President Bancroft saw the negotiations as a possible win-win situation wherein the union would accept the wage freeze and the company would double employment over the next ten years. In Vice President Bancroft's estimation the question was, "do we win one or two Aegis ships per round?" (Bancroft 1988). It is clear that the company felt that a favorable labor contract was necessary to allow BIW to receive a substantial portion of the last major new shipbuilding program of the twentieth century.

**Company Goals**

The negotiating goals for the company were established in the previous year by Haggett and the BIW management team. In fact, Haggett made a public presentation on the need for BIW to be competitive with Ingalls shipyard. According to Haggett, the company had three primary goals in mind well before the start of negotiation:

1. To arrest the rapid increase in wages. BIW did not want to reduce the wage rates, but wanted to lower the average cost of wages. This was to be accomplished by instituting a two-tier pay scale and hiring many new employees.

2. To shift some of the health care burden to employees, especially the initial costs. BIW wanted workers to use health care only when it was needed.
3. To enhance productivity. Relaxing work rules to allow for cross-trading was an attempt to eliminate inefficiencies and waste in man-hours. It was a non-economic change but of great value to BIW (Haggett 1988). The director of labor relations, Steve Wilson, also saw the negotiations as an opportunity to focus on productivity improvement and hoped to obtain a no-strike clause and a tighter policy on absenteeism (Wilson 1988). According to the union president, the lost time policy was a big thing. The wording of the previous contract left much room for abuse (Ladd 1989).

Union Perspective

The union perspective on why they went out on strike was not unanimous. Most committee members were adamantly opposed to any concessions and the company was demanding large concessions. As the federal mediator observed, "the union was not going to concede to concessions" (McGonagle 1988). The union president indicated that people were upset as a result of the failed attempts to negotiate in 1984. In his opinion, they had lost respect for the company and some workers with twenty or thirty years seniority said, "I don't care what they offer, I'm for strike" (Ladd 1989). By the time of the strike vote, many on the committee felt that the strike was necessary just to minimize the damage. "We had to prove that we would not back down after three weeks as the company expected," stated the union president (Ladd 1989). The union believed they were going out in order to keep from losing everything.
However, the more hard-line members of the committee felt that the union had no choice but to strike. The company's offer was totally unacceptable on items other than wages for workers presently employed. With permanent two-tier wages, a $1,500 family medical deductible, and unlimited cross trading on the table, the strike was seen as necessary to move the company. The defiant attitude of the union hard-liners is best summed up by the following statement: "The strike cost the union up to $7,200 per person, . . . but isn't your self-respect worth that much?" (Meader 1988).

Other hard-liners claimed the strike was something the company wanted. In their opinion, BIW wanted to win and make the union crawl back because the union had gained too much power. The union president claimed, "Congoleum wanted to teach us a lesson" (Ladd 1989). In the opinion of another union negotiating committee member, "it was a company-called strike" (Parks 1988). A former union president claimed that after 1982, the shop stewards were better trained than the leadmen. The union ran training schools for shop stewards and the number of grievances greatly increased. In his opinion, "the company wanted to beat the union down" (Ward 1988).

Vice President Bancroft pointed out that, "If the union knows BIW is doing well financially, the only leverage is to put them [the union] on strike for a long time" (Bancroft 1988). The notion that the company forced the strike is
supported by a comment from the director of labor relations when he said, "Anyone can cause a strike . . . the trick is getting them back" (Wilson 1988).

High Union Expectations

In the spring of 1985, most rank-and-file members of the union had expectations of a much better contract package than the one offered by the company. The common perception was that BIW was a very profitable company due in large part to the hard work and productivity of a loyal and long-tenured work force. Secretary of the Navy John Lehman's statements to the work force about BIW profitability also raised the expectations of workers. A union official claimed, "the average member of the rank-and-file . . . only saw the profits and demanded a share" (Portella 1988).

Union expectations also could have been raised by the process by which union demands were identified. Union by-laws require departmental meetings where input is received from as many people as show up. At departmental meetings the committee asked the union members what they wanted in terms of a pay increase, pensions and insurance. In addition, each committee member had his own personal prejudices and home interests. For example, one team member saw his role as one of protecting unskilled workers in the shipyard. His sense of mission was to help laborers and sandblasters (J. Finn 1988). Local 6 held a solid month of such meetings plus an additional week of long hours collating the information. Committee members also relied on experience, and one
member stated, "At that time, I had eleven years seniority listening to people piss and moan" (Meader 1988). "Beyond developing a gripes and wish list, negotiable items were separated into attainable and possibly attainable" (Dudley 1988). "We had strong positions and fall-back positions, but we didn't set priorities in a price tag sense" (C. Finn 1988). It was also necessary for the committee to discount unrealistic proposals such as a $10-per-hour pay raise and forty paid sick days (Ladd 1989).

As the time grew closer to the expiration of the contract, the committee was forced to scale back their expectations. The wish list from departmental meetings meant nothing. More than one member felt the initial strategy of starting high and working down was a mute process of wasted time and energy because they were just trying to hold their own. The president of the national union summed up by observing, "We were more or less defending what we had. We were trying to protect more than what we might have lost" (Batson 1988).

Union Goals

The initial objective of the union president was to keep the benefits at the same level and negotiate at least a 4 percent annual pay increase. However, the committee was in such a disarray that they never knew the level of wages and benefits it would take to settle. Even the union lawyers could not figure it out. Members of the negotiating committee talked about the leveraged buyout without really
understanding the implications for the contract talks. "In 1985 the union team was in trouble. I'm not sure they had a cohesive plan. It was like the Dutch boy with his finger in the dike. The division within the committee didn't help our position" claimed a union official (Portella 1988).

The union seems to have gone into the 1985 negotiations with a high level of expectations caused by all the publicity over their own productivity and BIW's profitability during the frigate program and by a series of favorable previous contracts. The union became committed to the position that, given past contract experience, a modest wage increase and no cut in benefits would be a reasonable and fair settlement. As a consequence, going into the negotiations, the union and company were not reading off the same page. The company was stressing a competitive wage rate that would allow it to obtain a substantial portion of contracts for Aegis-class warships while the union was emphasizing a fair share of the profits coming into a healthy shipyard. Furthermore, the union did not share the company's long-term view and certainly was not willing to trade-off wage increases for work performed today for the company's promise of increased employment to take place years in the future. Such a mismatch of viewpoints raises the possibility that a labor negotiation is headed for conflict from day one, as indeed was the case at BIW. On June 30, 1985, following a raucous, half-hour meeting at the
Augusta Civic Center, 4,500 BIW shipbuilders voted overwhelmingly to go on strike.

The Parties Reach Agreement

In the 1985 contract negotiations at BIW, resolution of the contract came about as a result of various bargaining tactics and strategies designed to make the cost of agreeing for at least one party less than the cost of continuing to disagree.

Company View

The management negotiators from BIW indicated that the settlement came about as a result of tactics successfully employed during the negotiating process. Bancroft saw the agreement as a triumph of incrementalism. In his view, the process involved getting agreement on the easier items first, and then moving bit by bit toward an overall agreement (Bancroft 1988). The labor-relations office believed that an important part of the process was engaging the chief union negotiator and the national union representative in off-line conversations where progress could be made without the interference of the rest of the union committee. This opinion was supported by some members of the union negotiating committee. The director of the labor relations office also believed that the $2,000 in bonus money was the key to the settlement after 99 days on strike (Wilson 1988). The company's offer of a $2,000 cash bonus substantially
decreased each union member's cost of agreeing to the company terms.

During this period, management made unions aware that regardless of the size of the unit, firms would continue to produce in the event of a work stoppage. McGonagle saw this strategy as a national occurrence that pervaded throughout the country (McGonagle 1988). In contrast to the BIW management, Duvin saw the agreement coming from continued pressure and successful negotiating strategies. For Duvin, a key factor was the company's announcement that it was going to open the yard to shipbuilders on the following Monday. Duvin maintained that "hundreds would have come back the first day, and the union would have been broken within two weeks"³ (Duvin 1988). A radical member of the committee believed that the tentative agreement was reached because BIW called weaker committee members at home, and "put the fear of God in them." In fact, the phone calls made the members realize where the power lay. In his view, at this crucial time, management "smelled blood . . . Duvin was tough!" (Meader 1988). This is further evidence of Duvin's divide-and-conquer negotiating tactics.

On September 30th, the negotiating picture changed drastically as Haggett attended a five and one-half hour

³ In contrast, the president of Local 6 claimed that if BIW opened the yard, the workers still would not have crossed the picket line (Ladd 1989).
negotiating session at the Alumni House on the Bowdoin College campus. Haggett's appearance alone was a signal to get it done. He was a well respected "local guy" with credibility as being firm but fair. He made it clear that he was there to settle. The federal mediator, William McGonagle, stated that Haggett's presence may have made the difference. "If there was an issue that required a decision, he was right there" (McGonagle 1988).

Union View

The agreement on the union side of the table did not come easy. One committee member stated, "to this day, none of us really know how it came about.... We had a bottom-line plan to stick by and it just got stepped all over" (Ventry 1989). It was necessary for one member to change his vote and break the 4 to 4 tie on the union committee. The member who made a reluctant recommendation to accept explained that, "Fourteen weeks of mail and phone calls to the union hall put a lot of pressure on us. You can't really tell how many members want to accept the contract, you need to vote" (J. Finn 1988). The strike coordinator said at the time, "Our negotiators felt that this was the best they could get from the company. They didn't like it, but they felt the proper action was to submit the contract to the membership" (Milne, 1985a, 73). The conflicting positions within the union committee once again reflected how incoherence in strategy compromises bargaining power.
A hard-line committee member saw the tactic of the majority of the committee voting to take it to the workers for a vote without believing in it, as the "epitome of confusion and lack of local leadership" (Ward 1988). Another militant felt that with five of the eight committee members saying they could not get a better contract, the rank-and-file were left with a mixed message (Meader 1988).

On the union side, a major change came about when the national president became more involved in the negotiations. Arthur Batson provided continuity for the union. He is, in V.P. Bancroft's words, "a skilled negotiator--wily and cagey--damn good" (Bancroft 1988). When asked about the contribution of the national union, one local negotiator claimed, "Arthur Batson earned his money!" (C. Finn 1988). Batson was not receptive to giving ground on pensions and insurance. In his mind, if the union had acquired a benefit and "if the cost of that benefit goes up, too bad! We bought the benefit, not the cost of the benefit" (Batson 1988). Therefore, even management conceded that he remained defiant and resolute to the end in resisting concessions in fringe benefits. Batson may have been motivated by the knowledge that concessions on benefits at BIW would have a detrimental impact on his other union shipyard workers throughout the industry.

When asked about how the agreement came about, the chief steward at Bath indicated that the initial movement may have come away from the table. He recalled that Ray Ladd
walked by Bill Haggett on the porch of the Bowdoin Alumni House and made an offer that Haggett seemed to agree with. "It started the ball rolling, but the whole committee was not doing the negotiating. There was a side show going on with Ray Ladd and Arthur Batson versus two management negotiators" (Johnson 1988). This reflects the importance of informal as well as formal settings and negotiations in bargaining. Within the informal, the dimensions of power most apparent are personal skill, and the ability to influence the other party's definition of the situation. Haggett's respected position in the community soothed the tension and helped to remove the barriers to settlement.

The Length of the Strike

As the strike wore on into the fall, timing played a crucial role in determining the outcome. Because of the length of the strike, attitudes of the rank-and-file changed as they felt pressure on their standard of living.

The federal mediator believed that timing was the key to reaching a settlement. Three months into the strike, there was plenty of time to analyze the situation and influence union leadership. He also pointed out that in a strike situation the influence of spouses must be considered. In fact, complicating the dynamics of power even further, the company did make veiled threats at the table to take their case to the spouses if the contract was not ratified. Pressure on members' standard of living and uncertainty about progress in negotiations hurt the union's
cause. The question becomes, "How much longer do you stay out in order to get a little closer? Realities change after fourteen weeks" (Portella 1988). Proposal after proposal having fallen apart, had an impact on the rank-and-file and they wanted to have a say. The rank-and-file seemed to be losing confidence in their union leaders and they pressured to settle and go back to work. The local union president believed that the opinions of the workers had to be taken into account. He received about fifty phone calls pressuring him to settle the contract (Ladd 1989). In this case, the pressure of the rank-and-file influenced the union position, but it did not necessarily impact on the management's position because of the strong backing and direction of Congoleum officials.

The ratio of the cost of agreeing to disagreeing is a dynamic calculation that must be made continually in order for a party to know the optimum time to settle. As the strike wore on into the fall, the economic costs to the union members of remaining on strike outweighed the more subjective values that had helped to galvanize early support for the strike.

It is easier for striking shipyard workers to find work in the construction industry in the summer months. Haggett said, "it was getting cold; they were ready to come back" (Haggett 1988). One militant union committee member admitted that, "when the weather turned cold in October, it was a signal to return" (Ward 1988). The importance of this
factor can be seen in the dispute over the expiration date of the contract. The union believed that it was "blindsided" on this issue because Duvin said that it would not be a problem and left for Cleveland as momentum was building for an agreement. Haggett came to the table and said the date would be October. One union negotiator admitted, "I screwed up the termination date of the contract. It should have been July 4, 1988" (C. Finn 1988). This negotiating failure once again reflects the lack of experience on the union committee. The sides managed to split the difference to August, but it was in the words of a committee member, "like pulling teeth" (J. Finn 1988). It seems that the local management at BIW realized the value of a contract that expired later in the year.

The experienced union negotiator and national union president also believed that timing was the key to the settlement. He felt that the strike lasted too long and there was nothing to gain by staying out. It was obvious to him that the company was not going to back off. However, he still needed to convince enough members of the committee that it was time to vote on the company offer. Although there was a large gap in local leadership at the head of the union committee, the national union president waited until the last few days to assert his direction to the rest of the committee. However, he felt he was there to provide assistance and not to dictate to a local negotiating committee (Batson 1988). One radical committee member explained the
national's recommendation to end the strike on the fact that national union's strike fund was out of money (Ward 1988). In this instance, the lengthy strike added substantially to the economic costs borne by the union. Regardless of why Batson became more involved, the fact remains that when he did assume control of the union committee, the terms of the contract proposal were ironed out and a settlement was reached.

The Agreement

On October 1, 1985, both sides returned for what would be a lengthy session. For most of the session, the two sides were sequestered in separate rooms with McGonagle acting as a courier. The longest eye-to-eye session lasted no more than thirty minutes. McGonagle said that there were several periods when he thought the negotiations were going to break off, but "after three months, both sides showed a strong desire to conclude the strike" (Bailey, 1985c, 18A). The most significant change in this session was over the issue of cross-trading. Cross-trading is the practice wherein a first-line supervisor could require a member of one trade such as shipfitter to perform work exclusive to another trade such as welding. The company viewed cross-trading as a way to reduce "standby" time, while the union believed it could result in the loss of as many as five hundred jobs. A union committee member claimed,
Cross-trading was a very big issue. It has enormous potential for both BIW and for labor. It amounts to the elimination of craft lines along with safety and knowledge (Parks 1988).

In the early morning hours, BIW relented and agreed to limit cross-trading to one-half hour per day per employee. Union attorney Reitman sees this as perhaps the union's sole victory in an otherwise dismal contract. One union committee member indicated that Haggett gave away many items toward the end of negotiating and that Wilson had to whisper in his ear to restrain him (Ventry 1988).

Following the marathon negotiating session, the two sides reached a tentative accord that called for:

1. A three-year wage freeze at the average hourly rate of $11.47 an hour.
2. A temporary two-tier system, whereby new workers would start at $3 an hour less than established workers and get the annual $1 raises until parity is reached.
3. A change in health benefits to a Comprehensive Care plan with annual $300 deductible for individuals, $600 for families.
4. Cross-trading limited to one-half hour per day per employee.
5. The 7 percent shift premium remains and was not to exceed $1 an hour.
6. BIW was to pay a $1,000 bonus to workers for returning and another $1,000 in bonus money over the next three years ($500 December, 1986 and $500 December, 1987)\(^4\)

When Haggett proposed the bonus money, the stipulation was that the initial $1,000 was to be reduced by $250 every two weeks if the strike was not settled. The bonus money turned out to be a key factor in a favorable union vote to ratify the contract on October 7, 1985.

In accordance with Wilson's goal of tightening up the absenteeism policy, contract language was changed. In the 1985 contract, a worker is allowed 40 hours absent in a three-month period. Anything beyond that results in a written warning (Ladd 1989). However, at least one member saw the attendance policy as, "one you can drive a truck through. It can be viewed as a benefit. It can be pushed to the limit without [fear of] being fired" (C. Finn 1988).

Had the tentative agreement been overwhelmingly rejected by the rank-and-file, it would have given the committee a clear signal to go back and fight for more. As it turned out, the vote to ratify was very close and the question of a 50 percent majority was an issue for the first time in memory (Ward 1988). One committee member believed that "the fact that we went back to work was a surprise to BIW" (Meader 1988). The morning after the agreement, the same

\(^4\) The bonus method may be a new ploy by profitable companies trying to win concessions. Shortly after the BIW settlement, Chrysler's settlement with the UAW also included a $2,000 bonus for returning strikers.
committee member called into a radio talk show to talk about the negotiations. He summed up by saying that in the end, they were too tired to fight anymore (Bancroft 1988).

In an interview with the *Boston Globe*, Haggett said, "I certainly wouldn't characterize it as a victory. We went as far as we could go. I'm certainly hopeful that it will keep us competitive" (Milne, 1985a, 73). In a characteristically modest assessment by Haggett, he said, "It was time to end it. So we made compromises we didn't intend to make.... We achieved our minimal objectives" (Bailey, 1985c, 18A). This modest statement on the settlement contrasted sharply with most assessments in the media. For example, the *Boston Globe* reported that, "Industry observers from both labor and management yesterday awarded victory to the shipyard" (Milne, 1985b, 47). Patrick Morris, vice president of the Shipbuilders Council of America, said, "It appears to me the management people at Bath have, in large measure, achieved their objectives" (Milne, 1985b, 47).
APPENDIX B

LONG-TERM CONSEQUENCES OF THE 1985 CONTRACT SETTLEMENT
What the Parties Thought of the Agreement

Company View

Not surprisingly, the top level managers at BIW were very pleased with the agreement. Haggett thought that it was acceptable to the company and with the right mind set, it would have been acceptable to the union. From Haggett's perspective, BIW did not really get much in the way of concessions. First, in some instances, the health care plan was superior to the old one since it provided a lot of protection if workers really became sick. Second, cross-trading was only a foot in the door. If cross-trading was seen as a threat to the union and an attempt to reduce the size of the work force, Haggett's response was, "ridiculous." In his view, the attitude of the work force toward the agreement needed to change as they were soured by the union leaders (Haggett 1988). Vice President Bancroft thought that the settlement was "excellent for BIW" (Bancroft 1988). Bancroft told the president of the union, "after the strike, you'll forget about it in two months" (Ladd 1989). He believed that morale and productivity would quickly return to normal. Immediately following the agreement, a company statement expressed hope that "traditional BIW management/labor teamwork quickly returns." The labor relations office thought that the company had attained the
principle goals which it sought. However, from Wilson's perspective as a local veteran negotiator, he believed that even though the package was acceptable, management had set themselves back years in their relationship with people (Wilson 1988).

Duvin's view of the settlement was somewhat different and it sheds light on his role in the negotiations. He acknowledged that he achieved a lot of his original goals and that he drove a tough bargain. However, he claimed to have had great respect and admiration for the union members. He said that he liked the Local 6 people personally because they showed a lot of strength and courage in the strike.

The union paid a very tough price to make their stand. I admire them. They were men out there. When they came back they came back like men, not like beaten down sheep. They lost their fight, but they did the best they could do. There was not a lot of whining (Duvin 1988).

His personal feelings were that "it is easy for negotiators to get caught up in the battle of these big collective bargaining fights once they turn into wars" (Duvin 1988). His mixed feeling came from the sense of personal achievement combined with a respect for the fight made by the union.

Duvin's attitude conveyed to the union negotiators was that within six months following the strike, the workers would forget the terms of the contract and productivity would be back to normal. If good workers left, the company
could get someone off the street to replace them (Duvin 1988).

Union View

The more hard-line members of the committee obviously did not like the tentative agreement and openly fought against its ratification prior to the vote in Augusta. They felt that the union had been abused by the company and that they were being treated unfairly. "BIW tried to sell us on the idea that less of a concession was a good deal. It was all below zero! They would say to the press they were moving, but it was from minus ten to minus five," stated a militant committee member (Ward 1988). Even the union's lawyer, Reitman, said, "The bottom line is the company, under circumstances that in my view don't warrant it, got two-thirds of everything they wanted" (Bailey, 1985c, 1A).

A member of the union committee compared the agreement to "damage control" aboard a ship on fire (J. Finn 1988). For moderates, the agreement was the best the union could get under the circumstances. There was a general feeling of helplessness and frustration among some members. This feeling was primarily the result of a recognition of the weakness of their power position. One committee member stated, "we were in combat without ammo! Everything was against us" (Ventry 1989). When asked to give his assessment of the agreement, the strike coordinator claimed that both sides suffered as a result of the terms of the contract. First, it was unfair to members of Local 6... "we
were some f...[expletive] pissed-off" and second, it was poor for BIW because of damage to morale and productivity (Dudley, 1988). However, there were some moderate members that took some solace in the fact that the union received much more than the company's final offer before the strike.

After three years to reflect on the settlement, the chief union steward at Bath totalled up the pluses and minuses and concluded that on balance the union came out a little ahead as a result of the strike. First, the $2,000 bonus could be view as money earned since it was part of the total settlement. Second, the lost time without pay was a minus for many families. Third, the change in comprehensive care was only a loss to people who had to use it for normal health needs, but it was a plus for people with serious health problems.¹ Finally, the two-tier pay structure did not affect those people who were already working (Johnson 1988).

When interviewed three years later, the union president claimed that the agreement was not a good one. However when asked to evaluate the union's accomplishments, he claimed, "when you compare the outcome with other contracts negotiated during the same time period in other industries around the country, ours was okay . . . it was not all give-backs" (Ladd, 1989). The federal mediator's assessment

¹ The comprehensive care paper work was very complicated and Blue Cross and Blue Shield finally decided to terminate the plan. As one member put it, "You're not dealing with rocket scientists here!...it was too complicated for them to use" (Dudley 1988).
was that the overall settlement was not concessionary from his professional point of view. He pointed out that, "the parties agreed and it was ratified. The rank-and-file accepted it and they have to live with it" (McGonagle 1988).

Decrease in Worker Morale

Following a contract negotiation where significant concessions were granted, it is understandable that members of the union committee and other union officials would be bitter about the terms of the settlement. In the case of the 1985 settlement, the bitter feeling quickly filtered down to the rank-and-file. The negative attitudes of the union officials had a direct impact on the overall morale in the shipyard. There were hard feelings throughout the shipyard as people felt they were sold out and that their efforts were not fully appreciated by the company. The workers wondered, if they were the best shipbuilders, then why were they being treated this way? (Johnson 1988). The national union president believed the company created their own problems. It was, in his opinion, "an embittered strike in which we began to hate each other. Usually you have good days and bad days with the feeling that tomorrow things could turn. Conditions actually worsened after the strike ended. This was very unusual" (Batson 1988). This reaction was not anticipated by Haggett. He thought the workers would keep performing. "For the first two or three weeks, they should be euphoric about being back to work. After a
short time, hard feelings began to resurface" (Haggett 1988). A union committee indicated that the bitter reaction of the rank-and-file was not normal. In his view, "Haggett thoroughly underestimated the consequences of [the company's] actions" (Ventry 1989).

Six months after the settlement, the union issued a press release in which it claimed that the single most influential factor on productivity is worker morale. The union maintained, "BIW is either oblivious to this fact or it is totally unconcerned with productivity." The release also mentioned that Eddy Nicholson, co-owner of Congoleum Corporation had "recently purchased a tea table for the paltry sum of $1,045,000." Another press release warned perspective buyers of the shipyard that "BIW management had driven morale into the ground."

The union president, Ray Ladd said, "morale is at the worst it's ever been, an all-time low, and I don't know if it will ever get back to normal" (Lovell 1986, 30A). Some members of the rank-and-file were incensed that they had made concessions to keep costs down and the company had given an extra two weeks vacation to all salaried personnel. Incidents such as this tended to confirm the suspicion that the company did not value its production workers. The chief union steward at Bath indicated that the rank-and-file did not like the contract, but took it for the sake of their families. He claimed, "the company was not interested in their needs" (Johnson 1988).
The low employee morale was reflected in the large increase in the number of grievances awaiting arbitration. Between the settlement on October 8, 1985 and February 1, 1986, more than 170 grievances were pending as opposed to about 60 pending a year earlier (Lovell 1986). Each pending grievance had the potential to cost the union $2,000 to $3,000 to be heard in arbitration and this cost could have impacted severely on the financial solvency of the union following the depletion of union resources during the long strike.

Many grievances arose from the company's plan to force non-management employees to undergo random urine tests aimed at detecting drug and alcohol abuse. The company maintained that the main objective of the policy implemented in February of 1986, was to prod employees with drinking or drug problems to seek help. However, Ladd objected to random tests which could be used to harass workers. He also believed that the urinalysis program should have been the result of joint discussions between the company and the union, rather than a unilateral imposition by the company (Lovell 1986). Many members of the rank-and-file felt that the company's drug screening policy was not intended to eliminate substance abuse problems but to eliminate people. It was viewed by union officials as a disciplinary action. The union strike coordinator commented, "BIW is going to show us that they are going to manage the yard" (Dudley 1986).
Sale of Bath Iron Works

The impending sale of the shipyard by Congoleum had a pronounced effect on the morale of both labor and management. Throughout the entire negotiating period, rumors persisted that BIW was being offered for sale. In the spring of 1986, the strike coordinator indicated that one reason the owners of the shipyard did not care about morale and productivity was because they were looking to sell the shipyard (Dudley 1986). In August of 1986, less than one year after the 1985 labor settlement, the rumors became reality. Congoleum managed to divest itself of BIW with the sale of the shipyard to the investment banking firm of Gibbons, Green Van Amorongen Ltd., a New York-based private investor group. Prudential Insurance company was reported to be the leading investor in the buyout. The sale of BIW was part of Congoleum's move to dismantle itself by selling off corporate assets worth over $850 million (Milne 1986, 77).

The owners of Congoleum, Nicholson and Radaker, said that they began working in October, 1985 to dissolve Congoleum after deciding that the stock market had peaked. The timing of the sale also proved fortuitous to the executives as they were able to sell before the 1986 tax code revisions on capital gains went into effect (Ditlev-Simonsen 1986). Although in a leveraged buy-out involving private parties nobody is required to divulge figures on the sale price of the shipyard, the Boston Globe reported the price to be
about $675 million dollars. In June of 1986, *Business Week* claimed that "if Congoleum gets anything close to $600 million for BIW, it will be a major coup" (Payne, Griffiths and Therrien 1986, 47). An industry source said, "They are really selling that destroyer contract. They'll put the money into new investments and won't have to worry about the vagaries of shipbuilding" (Payne, Griffiths and Therrien 1986, 47).

When asked about Congoleum, the union president stated that, "they were the most greedy pair of big businessmen who had no feelings for the workers in the shipyard. They were only there to make a profit and they only cared for the all-American dollar." Ladd also indicated that he, "has no respect for them. They knew that they were selling this company and that they only wanted to get more when it sold" (Ladd 1989).

For years, organized labor has been helpless as takeovers and leveraged buy-outs have weakened the unions and reduced its numbers. Recently, a growing number of unions are finding ways to combat the effects of corporate deal-making. Some are granting concessions on the condition that they be repaid if the company is sold. Others are toughening up clauses in their contracts that require a new owner to recognize the union. And a few are trying to influence the outcome of takeovers by becoming capital players themselves in the capital markets when their companies are put into play (Schiller 1987). However, in 1988, the union
negotiated none of these options in an effort to protect itself from the detrimental effects of another corporate buy-out.

**Productivity Losses**

As a result of the bitterness and low morale, production in the shipyard drastically slowed down in the months following the settlement, and few workers cared about quality (Ward 1988). Neither side anticipated the severe drop-off in morale and production. One committee member observed, "even the first-line supervisors were demoralized ... and they were angry too! Their benefits were tied to ours" (Ventry 1989). "Teamwork and cooperation is not in the contract," observed one member. "You can't force workers to get along with others" (Ward 1988). Another member saw work under the contract as "guerrilla war, a daily battle in an undeclared strike mode (J. Finn 1988). A committee member observed, "when quality craftsmen who have worked hard for many years don't care, then you know something is wrong" (Ventry 1989). Jonathan Reitman, lawyer for Local 6, said, "Management got what it wanted in that strike. It is living with the consequences of getting what it wanted" (Milne 1987). "The company didn't know what problems they were setting themselves up for. There was no sense of community" (C. Finn 1988).

A little more than one year after the settlement, evidence of productivity problems at BIW were reported in
the media. The *Maine Sunday Telegram* reported in December, 1986 that BIW was behind schedule and over budget on the series of six Aegis-class warships it was building for the Navy. The company attributed the problems with productivity to the 1985 strike and "a start-up jinx" as workers learn to build the new class of warship (Holmes 1986, 1A). A union committee member claimed that, "management doesn't want to know the truth about how first class mechanics in the yard really feel. They claim they've researched it thoroughly, and there is no problem" (Ventry 1989).

News of BIW's troubles first surfaced in *Defense Weekly*, a Washington-based industry newsletter which reported that BIW was behind schedule on the six ships and faced cost overruns of up to $90 million. It quoted Navy documents which said that contracts signed by BIW were "considered below the builder's break-even point." The article also quoted a Navy source as saying that BIW's 1985 winning bid of $322 million to build the first in a new class of destroyers was $40 million below the 1986 estimate of the projected cost.

Rear Admiral John Shaw, director of the Aegis program, confirmed the basic elements of the story in a briefing for members of the Senate Armed Services Committee staff. Shaw had disclosed earlier that BIW had presented the Navy with a formal proposal to give it up to four additional months to build each ship. The original contract called for BIW to build each ship in forty-five months (Holmes 1986).
The negative publicity concerning productivity problems in the shipyard presented management with a very serious long-run problem. Articles appeared in the *Boston Globe* and the *Wall Street Journal* which indicated that productivity problems plagued BIW (Milne 1987; Carrington 1987). If the productivity problem were as serious as what was being reported in the media, the company stood to lose more than just the profits on the six Aegis class ships under contract.

After years of receiving a lot of publicity for building quality ships ahead of schedule and under cost, BIW's reputation as a prime supplier to the Navy was in serious jeopardy. In such a closed and insulated industry such as shipbuilding, a company's reputation for having a hard working, productive and satisfied work force is very important to winning Navy contracts. The Navy indicated that BIW needed to improve its productivity and labor-management relations in the yard if it was to receive more Navy work. BIW was already the second source shipyard for the Aegis cruisers, but having the reputation as a contractor with labor problems could influence the Navy's decision to award contracts to build cruisers at Ingalls or at BIW. BIW's concern over their reputation with the Navy was well

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2 A private watchdog group in Washington, the Project on Military Procurement, revealed that two BIW quality assurance specialists had warned in company memos that the company was using steel for the Aegis cruisers that was marked for inspection but went through without being inspected (Carrington 1987).
founded. In the summer of 1988, the contract for the last five Aegis cruisers was awarded early and four of the ships are to be built at Ingalls shipyard. This award had serious financial consequences for BIW because the latter stages of a weapon systems program can be very profitable to the contractor which benefits from the learning curve when reducing production costs.

The negative publicity also had the potential to adversely affect Congress and its funding of the entire Aegis weapon system. On Capitol Hill, Maine Senator William Cohen and others had persuaded colleagues to buy more Navy ships by pointing to competitive savings. A highly-publicized dispute over future program costs could make Congress more skeptical of building large numbers of ships each year (Holmes 1986).

It is clear from talking to union and management officials that 1986 was the low point in labor-management relations at BIW. Morale in the shipyard was at a low point and this had a significant impact on productivity. The lower productivity not only reduced profits on existing contracts, but also damaged BIW's reputation and jeopardized BIW's chances to receive future contracts with the Navy. More alarming to the shipbuilding industry was the possibility that cost overruns on the lead destroyer could affect Congressional support of all new naval construction.
What Would be Done Differently

Company View

Since the outcome of the bargaining seemed to be so successful in attaining goals, the chief company negotiator, Robert Duvin, was not about to second guess his bargaining strategies. In his view, he was brought in to drive a hard bargain and he very effectively did the job.

However, the local management of BIW was not so quick to give the strategy a carte blanche approval. Because the labor relations office deals with the workers on a daily basis, they came to the conclusion that although the terms of the settlement were favorable to the company, the personal relations between BIW management and the work force were seriously impaired. The director of labor relations recommended changes in the way future contracts should be negotiated:

1. Do not go for early negotiations again. It did not work prior to the 1985 or the 1988 negotiations. Failed early negotiation jeopardize credibility.

2. Do not bring in a "hired gun" labor negotiator. Keep the same team in place and deliver a sincere message.

3. Do not be so severe in driving down the terms of contract.

4. Do more table-setting. Go more to the public and educate the people about the problems of competing in the industry.
Had BIW followed these procedures in 1985, Wilson thinks there would still have been a strike, "but it would not have been ninety-nine days and bloody" (Wilson 1988). It is clear that after working twenty-five years for BIW, Wilson identifies with the long-run needs of the company, including the need to maintain a satisfied and highly-motivated work force. He was the company's chief negotiator in 1979 and in 1982 and he did not appreciate being pushed aside for Duvin in 1985.

Wilson also is opposed to having corporate finance specialists or top company management becoming directly involved in labor negotiations because they are not in their area of expertise and usually grant too many unnecessary concessions. In fact, one union negotiator asked Duvin why there were no production personnel on the management team. His response was, "They make lousy negotiators" (C. Finn 1988). At least one point on which both Duvin and Wilson agree, is that successful labor negotiations should be conducted by skilled and experienced professionals who specialize in contract bargaining. They differ on whether the negotiators should be brought in from the outside.

Haggett agreed with the last three recommendations from the labor relations office. He believed that Congoleum's insistence on bringing in its own labor lawyer was a major mistake since he was perceived as a hired gun. Haggett said, "He was not local, and his style of being very tough at the table did not work well. It looked like he was
trying to squeeze the blood out of the work force after one hundred years of building good ships" (Haggett 1988).

Haggett would like to see an effort to "condition" the workers to more readily accept the company's offer. He thinks that "a wage freeze, proper conditioning and the contract would have flown (Haggett 1988). By "conditioning" Haggett means a more effective job of educating the workers and the public about the competition in the shipbuilding industry. Haggett also believes that to ask for givebacks early in the talks was a mistake. According to Haggett, "The company should have gone to the union with a non-negotiable offer of a wage freeze and taken the rest from there" (Haggett 1988).

Haggett indicated that Congoleum simply would not move off its original bargaining goals with respect to cross-trading. Haggett would not have insisted on cross-trading because he felt, "one-half hour a day is meaningless from the company's view and it only created animosity with the union" (Haggett 1988).

Union View

Being on the losing side of a contract negotiation gave the committee members a far different viewpoint on what should have or even could have been done differently. The union committee was unclear about its goals and they certainly did not have a well-defined plan of action for the entire negotiating period. It is perfectly understandable then, that the responses covered the spectrum from "do
everything different," to, "it would not have mattered because the union was destined to lose anyway."

As elaborated in Chapter VI, some of the hard-line members believed that the strike should not have ended when it did. One hard-liner expressed the notion that BIW was not prepared to withstand a long-term strike and would have capitulated under continued strike pressure. He pointed out that re-certification of welders and tackers would have been a problem for BIW in one more week because they would have been off work for more than one hundred days. It is clear that the hard-liners never fully understood the extent of Duvin's resolve to obtain a labor contract favorable to the owners of Congoleum.

There was a strong sentiment among the committee members themselves, that given the make-up of the committee, there was not much that could have been done to produce positive results. When asked what he would change on the committee, one member said, "I'd change two members of the committee--the elected positions. Radical discussions should not be at the table. We needed to caucus on neutral ground" (Parks 1988). Being elected by the union membership does not necessarily mean that a negotiator will contribute to the bargaining process. At least one member was seen as being detrimental as he was "too far off-center making unrealistic demands. It caused a lot of friction" (Parks 1988).
Members of the committee recognized that they are shipbuilders and not professional negotiators. The majority of the members had never participated in the negotiation of a labor contract. As one member explained, "When workers sit down with management, we don't come out very good" (C. Finn 1988). Another member observed that, "The company sends in the best negotiators. The union sends in the best it can get" (Meader 1988). A member who recognized his limitations as a negotiator, suggested that if he were given the chance to negotiate again, he would concentrate on taking better union notes of the negotiating sessions (J. Finn 1988).

Another member raised the point that the local union is a transparent democratic organization, whereas the company is not. For example, when the company asked to re-open talks early again in 1988, the union divulged its sentiment to the company before they had to. By finding out the vote count after making a semi-reasonable offer, the company knew where the rank-and-file stood (J. Finn 1988). In the long run, this can be more important than knowing what the negotiating committee thinks, especially if the committee is a divided and impotent one.

If the union had had a well-defined strategy going into the negotiations, it would have been much easier for them to evaluate their performance based on the success or failure of the overall strategy. As frustrated as they were, members were reduced to either blaming Congoleum for hard-
line negotiating or blaming other members of the committee for not doing their job.

Even though members of the union committee were disappointed with the terms of the contract, there was a feeling that they had done the best they could, given the circumstances. One thoughtful member stated, "I thought for a while that I would never do anything significant in my life... serving on this committee made a difference for a lot of people" (J. Finn 1988).

Effect of the '85 Settlement on the '88 Negotiations

Company View

In 1988, with Congoleum and its labor attorney, Duvin out of the picture, and V.P. Bancroft severed from the company, the labor relations office was once again playing a more prominent role in the contract negotiations. The theme in 1988, according to director of labor relations Steve Wilson, was to right the wrongs of 1985 and an attempt was made to correct these problem areas: (1) the two-tier pay structure was fixed; (2) health care went back to 100 percent UCR; and (3) the no-strike article was deleted³ (Wilson 1988).

Two-tier pay provisions, pioneered in the airline industry, sounded like a workable idea at first. Rather than fight to make workers accept cutbacks, many companies

³ Wilson claimed that "if we can't work out our differences during the contract without sending them on strike, then we're not doing our job" (Wilson 1988).
found it easier to lower pay scales for new workers, leaving current employees alone. From the start, however, skeptics warned that such pay rates would create friction between workers doing the same job for different pay⁴ (Bernstein 1987). In the view of BIW, the two-tier pay structure caused considerable friction between senior workers and the new hires and had to be terminated.

Haggett provided the other returning management voice in 1988. He believed that another strike was something that neither side could afford since he believed that a long strike was inevitable if one started. The strategy in 1988, therefore, was to indicate up-front just how far BIW was prepared to go. The union once again asked for financial statements. In order to prevent another stand-off over availability of data, the company suggested an independent audit to be paid for by the union. Comparing wages and fringe benefits, the audit report made it clear that the BIW offer was in line and that productivity must improve (Haggett 1988).

The other lesson to be learned from 1985, according to Haggett, was that it was necessary to condition the union to

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⁴ There were earlier examples of defense contractors paying lower wages for only some workers and this resulted in problems on the shop floor. In 1981, Hughes Aircraft Co. installed a two-tier pay system for mechanics in its Tucson missile plant. By September, 1984, when the company’s contract with the IAM was due to expire, the Navy was complaining of sloppy work on the Phoenix missiles. Citing poor soldering and other shortcomings, the Navy refused to accept more missiles until Hughes’ production improved. Soon after, Hughes agreed to a new IAM contract that got rid of two-tier wages (Bernstein 1987).
accept the package. Haggett pointed out that in 1988 most of the settlement was structured outside. Both parties agreed to the tactics. The union negotiator stated to the press, "We are still far apart, but we can talk." Haggett believed that this prevented any momentum to strike in 1988 (Haggett 1988). When the union planned a show of solidarity in Bath with automobile headlights and horns, management indicated that this would send a bad message to the rank-and-file. The union dropped the idea (Haggett 1988).

"Don't ever forget," cautioned Haggett, that "the bargaining environment is equal to the table in importance" (Haggett 1988). It is evident from this statement that Haggett's position is consistent with the econometric model of wage determination which accounts for the contribution of factors which collectively establish the bargaining environment.

One strategy that the company employed for the 1988 negotiations was to preempt several potential leaders of the union by bringing them into the shipyard as management personnel. The strike coordinator, the union president, his predecessor, the chief steward of the union and most other union officials with leadership potential in Local 6 had joined the ranks of management by the summer of 1988. This move by the company seriously weakened the union's potential to counter management's demands because it all but insured that the vast majority of the 1988 union negotiating committee would be inexperienced.
Union View

From the national union vantage point, the 1988 negotiations were in the words of a union negotiator, "just filling in the hole of three years ago" (Batson 1988). The 1988 negotiations were seen as a way for the union to get back what it had lost in 1985. "The 1988 negotiations put this committee to the task of asking for what we had already won--things that had been bought and paid for" (C. Finn 1988). The union president believed that the Bath management "wanted to give back what they took away in 1985" (Ladd 1989). A committee member pointed out, "If they had the money to pay for the health plan in 1988, than they certainly had money to pay in 1985" (Ventry 1989). It was obvious that the union needed to make some gains. However, senior workers only received a twenty-nine-cent raise since June, 1984. For the majority of workers, the 2.5 percent per year pay increase was negated by the company's proposal to have workers to pay more on insurance. The effect, for some workers was six and one-half years without a pay increase.

However, another strike simply was not an option for a majority of the rank-and-file. Several members of the negotiating committee indicated that given the outcome of the 1985 strike, they could not vote to authorize a strike in 1988. The union president pointed out that the union was less interested in a strike because each member had lost $7,000 in pay in 1985 and they did not get much as a result of the strike (Ladd 1988).
The demographics of the union had changed drastically with all the new hiring under the two-tier system. In 1988, management aimed the proposal at the more than 2,000 newly hired two-tier workers. A member stated, "All they had to do was offer the two-tier people a buck and they had a majority" (Ward 1988). Those who benefited the most were those with an anniversary date of August 20, 1987. "They received a $2.29 pay raise in a week!" (Batson 1988).

For one member of the committee, two-tier pay was a "touchy" subject. He felt that, "paying kids right out of high school $7.00 per hour was okay, but it was unfair to bring a full mechanic into the yard for two-tier pay" (Ventry 1989). In the words of one member, "it should mean something to be a first class mechanic" (C. Finn 1988). A member indicated that, "some old-timers have hard feelings against the two-tiers. Experienced people are not bothering to show the new people the ropes" (Ventry 1989). This could explain some of the drop in productivity, as well as lead to a less than fully-skilled work force in the future.

One committee member felt that removal of the two-tier pay system could have been a union bargaining chip in the 1988 negotiations. In his view,

We've known that the company has wanted to get rid of the two-tier pay for the last two years. The two-tier pay was not a big problem for the union, but it was a nine and a half out of ten for the company. The union should have made the company ask to remove the two-tier and get something for it (C. Finn 1988).
The two-tier provision in the 1985 contract gave management a chance to train many new workers at a lower wage. However, the national union president believes the two-tier pay also has great potential for a class action sex discrimination case. Because of EEO compliance requirements on federal contracts, many woman were hired in the three years under the two-tier system. The effect of this hiring is to have women underpaid as compared to the majority of workers in the yard (Batson 1988).

Some members of the committee were disappointed that the 1985 settlement did not have more of an effect on the 1988 negotiations. "The union could have done more this time, but I won't go for strike again" (C. Finn 1988). One member summed up by saying, "the 1988 settlement closed the books on the 1984 company attempts to re-open the contract" (J. Finn 1988).

The federal mediator pointed out that the experience of a long strike had a definite influence on negotiations in 1988. There was a change in leadership in the union. Now the union has a secret ballot vote--a more democratic process of contract ratification. In his view, in 1988, the union took a more serious look at the comparative position of the company, and the company realized that it had to increase morale in the shipyard in order to get production. BIW has recognized the need to work together with the union and, in the opinion of the federal mediator, this benefited both sides. He thinks both management and the union recog-
nize that they both are in an industry that is totally reliant on government contracts (McGonagle 1988).
APPENDIX C

SUMMARY OF THE REVIEW OF BILATERAL MONOPOLY LITERATURE
Phase I - Indeterminacy Debate

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Edgeworth</td>
<td>1881</td>
<td>all believed, contract without competition is &quot;indeterminate&quot;.</td>
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<tr>
<td>Pareto</td>
<td>1936</td>
<td></td>
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<tr>
<td>Price</td>
<td>1900</td>
<td></td>
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<tr>
<td>Marshall</td>
<td>1907</td>
<td></td>
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<tr>
<td>Wicksell</td>
<td>1925</td>
<td>argued that a determinate and stable equilibrium can be obtained.</td>
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<tr>
<td>Schumpeter</td>
<td>1927</td>
<td></td>
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<tr>
<td>Zeuthen</td>
<td>1930</td>
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<tr>
<td>Schneider</td>
<td>1932</td>
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<tr>
<td>Bowley</td>
<td>1928</td>
<td>rejected the possibility of a determinate equilibrium position.</td>
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<tr>
<td>Stackelberg</td>
<td>1934</td>
<td></td>
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<tr>
<td>Pigou</td>
<td>1934</td>
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<tr>
<td>Nichols</td>
<td>1941</td>
<td>found prices and quantity agreements probable in markets for industrial products, improbable in labor markets.</td>
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<tr>
<td>Leontief</td>
<td>1946</td>
<td></td>
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<tr>
<td>Fellner</td>
<td>1947</td>
<td></td>
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<tr>
<td>Dunlop</td>
<td>1950</td>
<td>detailed the theoretically possible range of solutions for 13 cases of market conditions.</td>
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<tr>
<td>Machlup and</td>
<td>1960</td>
<td>claimed the quantity agreed upon between parties would be the same as that produced by an integrated monopolist.</td>
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Phase II - Attempts at Determinacy

Foldes (1964) obtains a determinate solution by taking into account time preference and the use of threats to delay trade.

Cross (1965) utilizes Nash's Game theory attempting to make the model determinate.


Ashenfelter and Johnson (1969) develop a political model to examine the firms choice to "take a strike."

Hieser (1970) demonstrates analytically that the maximum wage bill a union might obtain is 2/3 of price.

Spindler (1974) believes that the equilibrium solution will involve an equalization of bargaining power and perceived profit.
Phase III - Refinement on the Model

<table>
<thead>
<tr>
<th>Author</th>
<th>Summary</th>
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<tbody>
<tr>
<td>Stewart (1979)</td>
<td>warns to be specific about whether both price and quantity, or only price can be effectively regulated by the negotiating parties.</td>
</tr>
<tr>
<td>Weinstein (1981)</td>
<td>relates the size of the bargaining range to the degree of union power and the union's information concerning the firm's demand for labor function.</td>
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<tr>
<td>Lazear (1983)</td>
<td>claims inelasticity of the demand for labor does not imply an increase in union power as measured by the union/non-union wage differential.</td>
</tr>
<tr>
<td>Riordan (1984)</td>
<td>considers uncertainty and asymmetric information and claims contracts can be implemented by a truthful sequential revelation game.</td>
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<tr>
<td>Dogas (1985)</td>
<td>claims market and class power effect money wages independently of unemployment.</td>
</tr>
<tr>
<td>Law (1986)</td>
<td>finds that in a model of fixed bargaining power, regulation may induce lower as well as higher wage rates.</td>
</tr>
<tr>
<td>Blair and Kasserman (1978)</td>
<td>derive a contractual agreement that achieves results very close to vertical integration.</td>
</tr>
<tr>
<td>Blair et al. (1989)</td>
<td>maintain that the correct solutions recognize that optimality requires joint profit maximization.</td>
</tr>
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APPENDIX D

THE PROCESS OF PRODUCING AN ETHNOGRAPHIC CASE STUDY
CONFESSIONAL TALE: THE PROCESS OF PRODUCING AN ETHNOGRAPHIC CASE STUDY

As the research tool in ethnographic studies is to a large extent, the researcher himself, it is required of the researcher to provide an account of the stages in the research.

Background

An important choice facing the researcher at the beginning of a case study is whether to enter the situation from a naive, and therefore, totally unbiased perspective, or to enter based on an informed viewpoint, based on extensive background research. The second option, the informed approach, was chosen for this study in order to sound knowledgeable when contacting and interviewing shipyard personnel and to cope with time constraints. As a reflection of the dual research methodology, the econometrics research precluded complete naivety.

A certain amount of familiarity with the subject matter already had been acquired as a result of research on the econometric model. In order to better understand the historical context, and the tasks shipbuilders performed, it was necessary to investigate the history of shipbuilding in the Bath, Maine region. Detailed and comprehensive histories of shipbuilding along the Kennebec River in Bath are given in Eskew's (1958) Cradle of Ships, Baker's (1973) Maritime History of Bath, Maine, and Snow's (1987) Bath Iron Works: The First Hundred Years. In these sources, one can
gain an appreciation of the difficulties of building ships in the northern climate and dealing over the decades with the uncertainty of the boom or bust nature of the shipbuilding industry. It was also instructive to review the history of the BIW World War II liberty ship construction program in South Portland, Maine, found in volumes of the history of the Maritime Administration and in Dorn (1985).

Background knowledge also was gathered from the media. Beginning in the summer of 1985, and continuing through the present, newspaper accounts were compiled of events at BIW from several Maine newspapers as well as regional coverage in the Boston Globe, and national coverage in the Wall Street Journal and the New York Times.

Shipbuilding Process. To be adequately informed, it also was necessary to be familiar with new developments in the process of modern ship construction, especially the construction of complex modern naval warships. While researching at the Portsmouth Navy Shipyard library, several publications detailing the Aegis weapon system, the main class of ship construction at BIW in 1985, and the Navy weapon systems procurement process were surveyed. McClane and McClane (1985), Bowen and O'Rourke (1985), Skinner (1986), and Bailey (1987) all discuss the role of the Aegis weapon system and its future importance to the mission of the U.S. Navy. Hope and Stortz (1986) and Alden (1985 and 1981) address the issue of naval construction costs constraints. New developments in shipbuilding design and production as
well as recent trends in ship repair can be found in Marine Engineering/Log and International Defense Review.

Preliminary Discussions 1985-86. As part of the research for a term paper in a graduate level labor economics class, in the fall of 1985, following the contract settlement, the researcher conducted preliminary discussions with several local union officials. It was important to the accuracy of the research project to establish a baseline and capture the attitudes, feelings and opinions of the union official in the time frame immediately following the contract settlement. Contacts were established and discussions were held with the union strike coordinator, the benefits director, the job bank coordinator and shop stewards. These initial contacts proved valuable later on as a rapport and some measure of trust was established with many of the union negotiators.

In the spring of 1986, follow-up discussions with union officials were conducted. However, the researcher regrets not establishing contact with the union president and chief negotiator during this time frame as it would have facilitated the arrangement of a formal interview later on in the research process.

In addition to the union leadership, a discussion with the then company's personnel director was conducted in his office in April, 1986. A telephone discussion with the director of the Brunswick office of the Maine Job Service also was conducted during this time. These discussions
provided initial contacts with the BIW labor relations office and valuable background information on the process of locating, recruiting and training shipyard workers.

Gaining Entry

The first important decision to be made with regard to gaining entry to the site of the case study was whether the research effort would be limited to the union viewpoint, the management viewpoint, or try to understand the labor dispute from both points of view. There is an inherent danger in labor-management research of arousing suspicion in the minds of one party when the researcher is seen as being sponsored by or spending too much time with the other party. Roy (1970) discusses problems of this nature when relating his experiences while conducting qualitative research on southern labor union organizing campaigns. Alerted to the risk involved with this approach, it was decided to proceed with an attempt to obtain data from all parties directly involved in the contract negotiations.

Dean et al. (1967) recommend that when establishing field contacts, the researcher should move from persons in the highest status and authority positions down to the actual participants in the field (281). With this advice in mind, in July, 1988, the researcher wrote to the president and CEO of Bath Iron Works, explaining the nature of the proposed research project, and requested that he authorize a visit to the shipyard. (see Appendix E) The researcher was well aware that going over the head of the director of labor
relations involved the potential for resentment towards an outside academic researcher. However, the access to the facility afforded by the CEO's authorization was indispensable.

The CEO's response was very positive and a senior labor relations specialist phoned to indicate that the researcher would have the full cooperation of the company, and that he would serve as the researcher's primary contact and facilitator during the research effort. This proved fortunate because this management official was a thirteen-year veteran of the company who knew which people to see and how they could be contacted. Being located in his office allowed the researcher to set up meetings efficiently so that my time in the facility was well spent. Working closely with the labor-relations office also allowed the researcher to easily contact several former union leaders who were brought into management positions following the settlement.

**Data Gathering Techniques**

It was determined that for this particular case study, the most appropriate data gathering techniques were participant observation and structured interviews. The initial activity of the data search was to spend two weeks in the shipyard in participant observation prior to conducting any interviews.

Participant observation is a process in which the observer's presence in a social situation is maintained for the purpose of scientific investigation. The observer is in a face-to-face relationship with the observed, and, by participa-
ting with them in their natural life setting, he gathers data (Schwartz and Schwartz 1955).

In terms of Junker's (1960) scheme of participant observation, the researcher moved toward the "participant-as-observer" category where he is free to explore as research interest beckons. The participant-as-observer role calls for informality of relationships with a few key informants over a longer period of time. The two week period of observation and informal discussions, although limited, was used to determine who were the important players, to refine topic areas for the interview schedules and to identify new issues for the case study.

Roy (1970) evaluates the participant-as-observer role in field investigations in light of his research experiences in a southern textile mill town. Roy presses the claim that "the Verstehen of acquaintance knowledge, acquired by participant observation, provides the soundest base, as well as the most fruitful source, for the engendering of action-meanings in human affairs" (244).

Implementing second data gathering technique, semi-structured interviews were conducted with both management and union negotiators. Cannell and Kahn (1953) maintain that social science requires data which must be reported by individuals out of their own experience (327). It was

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1 Verstehen represents an empathetic and intuitive understanding of the individual's situation. "Verstehen does not constitute a method as such, rather it is a particular form in which common sense thinking takes cognisance of the social and cultural world" (Colville 1981, 125).
crucial to the integrity of this study to tell the story of what transpired during the BIW labor dispute through the voices of those people who actually conducted the bargaining.

Piore's (1979) work on qualitative research techniques in economics proved to be an excellent point of reference. According to Piore, open-ended interviews "are ways of discovering how economic participants think about the world. They are means, in other words, of identifying the model of that portion of the socioeconomic world which the participants themselves use in decision-making" (80). What they reveal says Piore, are "patterns of responses" (81). Piore claims that open-ended interviewing can identify: (1) the understanding which the respondent has of economic reality, (2) how the participant views reality, and (3) the fact that the participant's model may be unstable, which may suggest genuine confusion on the participant's part. It was important to the accuracy of the study to interview as many of the participants as possible in order to cross-reference data in an attempt to sort out the different perceptions of reality in the labor dispute.

**Groundwork**

**Developing Interview Schedules.** Parten (1950) provides a solid baseline from which to begin a review of the literature on constructing an interview schedule.

Goode and Hatt (1952) define a schedule as "the name usually applied to a set of questions which are asked and
fitted in by an interviewer in a face-to-face situation with another person" (133). They recommend that there should be a logical progression such that the respondent is (1) drawn into the interview by awakening his interest, (2) easily brought along from items which are simple to answer to those which are complex, (3) not affronted by an early and sudden request for personal information, (4) never asked to give an answer which could be embarrassing, and (5) brought as smoothly as possible from one frame of reference to another (137). They also warn that, "Good rapport is not a substitute for good questions" (164).

Kornhauser and Sheatsly (1959) recommend the use of follow-up questions or probes at many points in the interview. In addition, they recommend that "the questionnaire should anticipate where these are required and should provide the appropriate wording" (548). They also provide a comprehensive guide for questionnaire construction which covers decisions about question context, wording and place of the question in sequence. Kerlinger's (1964) criteria for question-writing also is very useful for eliminating items that are ambiguous, that suggest a leading question, or that demand knowledge the respondent does not have. The interview schedules given in Appendix F were employed when interviewing subjects in both management and the union.

Maccoby and Maccoby (1954) claim that for some purposes, a semi-standardized interview may be the best. For example, "in the interest of flexibility, the research
worker sometimes specifies exactly a series of main questions, ... but lists a series of optional subquestions or probes which the interviewer is free to use or omit, depending on the respondent's answer to the main questions" (454). With their advice in mind, the numbered questions of the schedule represent the major issues while the points listed below were prompts to remind the researcher to make sure to cover these points during the course of the interview. The prompts also helped to trigger subject areas when the subject provided a minimal response. The questions represent the core of the idea and they were not asked in such an abrupt format during the interviews. The answers to questions were jotted down as quickly and as accurately as possible in hand written notes during the course of the interviews. A two-hour block of time was reserved after each interview to transcribe the notes into a more formal and complete record of the responses. This was done in an effort to have the details of each interview as fresh as possible when producing the qualitative data. The interviews were designed to be completed in less than one hour. However, most interviews lasted between an hour and an hour and a quarter. Some follow-up phone calls were required to complete the schedule or to clear up ambiguous answers.

Rehearsal Interviews: Portsmouth Navy Shipyard. In the summer of 1988, practice interviews were conducted with both management and union representatives at the Portsmouth Navy Shipyard. These sessions were intended to provide the
researcher with interviewing experience and to learn approximately how many questions could be reasonably answered in a one hour. In addition, concentrating on the mechanics of conducting a personal interview without using a tape recorder and transcribing the entire interview from notes immediately following the interview was valuable experience and instilled confidence for later use in the research. The interview with the president of the shipyard's Metal Trades Council and two of his assistants prepared the researcher for the rough-and-tumble world of interviewing union officials in the union hall during their workday.

Participant Observation. In order to understand better the nature of labor-management relations at BIW, it was necessary to spend two weeks in the shipyard prior to the structured interviews.

The researcher arranged to have lunch with the company host as often as possible as a way to increase the amount of informal discussions. In addition, the researcher met with the host and other managers from the labor relations office after work in the local tavern waiting for traffic to clear. The anecdotes related in these sessions provided valuable background information on the nature of labor-management relations in the shipyard. Another advantage of being hosted by a senior labor-relations specialist was the opportunity to observe the daily give and take between management and the union over grievances and the threat to go to arbitration.
An important objective of the observation period was to understand better the complex production process of how work is planned and executed in the shipyard. The researcher was fortunate to be escorted by a thirty-year veteran of the shipyard who conducted several tours of the entire shipyard. This individual, who worked for most of his career as a pipefitter and union official (including president of Local 6), was employed for two years prior to 1988 by the company as one of four field representatives troubleshooting labor problems between workers and first-line supervisors. His dual background afforded him a unique perspective on labor issues and his comments were both informative and objective.

Included in the shipyard tours was the enormous Prefabrication 1 building where slabs of pre-cut steel enter one end and the completed zones of the ship's hull exit the other. In this building, the different trades work together to construct the hull zones and install piping and ductwork. In addition, the shipyard tours included an inspection of one of the Aegis-class cruisers being outfitted at the main dock. The complexity of design and the tight operating quarters for production workers in shipbuilding was readily apparent in this tour.

Also included in the familiarization period was a tour of the Portland, Maine facility which utilizes an enormous floating dry dock for ship repair and for final outfitting on new vessels. The chief union steward of the Portland facility escorted the researcher on an extensive tour of an
Aegis cruiser which was scheduled to begin sea trials in three days. The sophisticated Navy weapons which included state-of-the-art computers and digital readouts everywhere were very noticeable.

A portion of the observation period included meetings with shipyard managers responsible for planning and production. The function of the planning department is to have the material, skilled labor, and blueprints all arrive at the right place at the same time. The researcher met with the chief project planner for the Arleigh Burke class destroyer. His division produces a six- to eighteen-month lead-time plan for producing a ship. Project planners divide the ship into individual production zones and describe the sequential process of constructing and outfitting each zone in a plan which then goes to the design department.

The researcher also arranged a meeting with the chief of production, who had direct responsibility for more than 2,000 production workers of the structural trades and 200 supervisors. The structural trades not only construct the steel work on the ship, but they must implement the 40,000 design changes for each ship required because of the spacial interface between the different systems. This production manager indicated that building combat vessels is unlike building anything else and that the complex nature of the construction process is difficult to comprehend.
Developing Trust. Gullahorn and Strauss (1960) discuss the role of the field worker in union research. In their opinion, one of the most difficult problems faced by the field researcher is that of structuring and maintaining a role "... that will gain acceptance by others yet allow him to do research—all without too much emotional strain on himself (153).

Wax (1960) discusses the issue of reciprocity in field work. Wax advocates having the field worker ask himself (and subsequently answering) the questions: "Why should anyone in this group talk to me? Why should this man take time out from his work to answer my questions?" (92). Wax further asserts that "an interviewer who knows that he is giving something in return is much more likely to maintain his respect for himself and for his scientific endeavors" (98).

Richardson (1960) outlines the "field relations" skills required for establishing and maintaining satisfactory relationships between the researcher and the people being studied. Richardson covers several topics which frequently recur in the field research, such as: (1) initial activities, (2) structuring the field worker's role, (3) sequence and timing of activities, and (4) incentives the field worker can offer informants.

Goode and Hatt (1952) maintain that the interviewer is attempting to establish three elements in the interview situation: (1) his friendliness and interest, (2) the worth
of the research itself, and (3) his own competence. During the period on-site at BIW, the researcher made a concerted attempt to conduct himself in a professional manner appropriate to his role as a Ph.D. candidate in labor studies. Great care was taken to protect the data gathered from each interview and meeting, and all discussions of the content of the interviews were avoided. The researcher was trying to foster the impression of an objective university researcher only trying to find out what transpired in the contract negotiations of three years earlier. Because of the tenuous nature of interviewing both parties involved in a labor dispute, it was essential that all parties perceived the researcher as being a neutral investigator interested only in the facts of the case. The researcher tried to refrain from indicating agreement or disagreement with observations and opinions of the parties contacted during the visits and phone calls to the shipyard.

Structured Interviews

Cannell and Kahn (1953) recommend that: first, the interviewer must be provided with a questionnaire which is adequate to the research objectives, and second, the interviewer must ask questions and record the responses in a standard way.

Goode and Hatt (1952) discuss the issue of insuring reliability of answers through the development of interviewing skills. They warn that the interviewer must be receptive to subliminal clues, and be aware of the fact that the
interviewee has insight and is guessing the motives of the interviewer. They also caution that the point of the interview is not to be an exchange of information, but the obtaining of information.

Kornhauser and Sheatsley (1959) claim that once the respondent has been put at his ease, from then on, "the interviewer's art consists in asking questions properly and intelligibly, obtaining a valid and meaningful response, and recording the response accurately and completely (575). They recommend that the responses be recorded verbatim. They advise that the interviewer should take all opinions in stride and never show surprise or disapproval of a respondent's answer. They maintain that, "alertness to incomplete or nonspecific answers is perhaps the critical test of a good interviewer" (578).

Dean, et al. (1967) indicate that the major limitations of observation and interviewing in the field are: that the data are not generally useful for statistical treatment, and that bias is likely.

Ferber and Verdoorn (1962) suggest the use of the "dummy interview" and also identify several sources of bias which result from poorly conducted interviews. Ferber and Verdoorn indicate that interviewer actions and attitudes may contribute to the preconditioning of respondent answers. Some of the principle forms of preconditioning encountered in economic and business surveys which they describe are bias due to one or more of the following: (1) fear of iden-
tification, (2) knowledge of the sponsor, (3) expectations about the purposes of the research, (4) inflections in the manner of asking questions, and (5) the interviewer's appearance.

During the latter part of August, 1988, arrangements were made to visit the shipyard a second time in order to conduct a series of personal interviews with both management and union officials. By being persistent, without being too much of a pest, every person directly involved in the 1985 labor negotiation was interviewed. Introductory phone calls and arrangements for times and places were made through the office of Arnold Clay, in the labor relations office. For the most part, the researcher travelled throughout the shipyard in order to meet the subjects in their place of work as this was seen as a way to lessen their inconvenience while increasing the actual time spent in the interviews. All company officials were interviewed on company time provided as a result of the CEO's authorization of the research project. When it was impossible to meet with some union members on company time, they graciously consented to meet in the union hall, either during the lunch break, or after work. However, traffic congestion and car-pooling by union members limited the number of after-work interviews.

It was necessary to interview one union negotiator in his home after work. The setting provided a new perspective on shipyard workers and the relaxed atmosphere allowed for more thoughtful answers and extra time to jot down more
complete notes of the interview. His wife overheard the interview as it was conducted at the kitchen table while she was preparing dinner. This experience made the research more personal and increased the researcher's involvement in the research project.

The most difficult union official to contact and arrange to interview was the union president and chief negotiator. Repeated phone calls and letters to the union proved fruitless for over six months. Eventually, he accepted a job working in a management position for the company and arrangements for an interview were made through the labor relations office. His guarded demeanor indicated that his perspective would have been somewhat different had the interview taken place seven months earlier.

One management negotiator had separated from BIW following the settlement, and it was necessary for me to interview him in his wood products manufacturing facility in another part of the state. In light of his difficulties with union negotiators, he seemed much happier as owner/CEO of a smaller, rural, non-union company.

The most difficult interview with a management negotiator was with the director of the labor relations office. Before the start of the interview, he made it clear that his cooperation was primarily the result of the CEO's sponsorship of the research study. He also indicated that he and his subordinates were busy people and that the researcher was taking up valuable time without providing much in
return. It was not a promising beginning to an important interview. However, as the interview progressed, the respondent warmed up to the task and provided candid and informative answers.

In addition to BIW personnel, an interview was conducted with the federal mediator assigned to the 1985 labor dispute. This interview took place in his office in the federal building in Portland, Maine. One could not help but notice the measures taken on his part to insure the strict confidentiality of all BIW negotiation discussions. The standard procedure is to systematically destroy all written records of the details of each case so that only the case identification and the case findings remain on the official record. His answers to the interview questions came entirely from his personal recollection and impressions of the negotiations.

**Deskwork: Writing the Ethnography**

According to Van Maanen (1988) a culture is expressed only by the actions and words of its members and must be interpreted by, not given to, a fieldworker. "To portray culture requires the fieldworker to hear, to see, and most importantly, to write of what was presumably witnessed and understood during the stay in the field. Culture is not

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"Culture refers to the knowledge members of a given group are thought to more or less share; knowledge of the sort that is said to inform, embed, shape, and account for the routine and not-so-routine activities of the members of the culture" (Van Maanen 1988, 3).
itself visible, but is made visible only through its representation" (Van Maanen 1988, 3).

The ethnography belongs to an established tradition in the social sciences (Van Maanen 1988). Wax (1971) details a comprehensive sketch of the history of field work from the writings of Herodotus in the Fifth Century B.C. to the Chicago school's emphasis on "participant observation." In the 1950s, before the domination of empirical studies, field work was a more common form of inquiry in business and economics. Today, field work is undergoing something of a reawakening and expansion. According to Van Maanen, "the distinctive, inquisitive, intimate form of inquiry called field work is becoming increasingly popular outside its traditional disciplinary and relatively insular boundary" (24). The qualitative research of this study is intended to be a part of the reawakening and expansion of ethnographies to labor studies.

The scientific status of case studies has roots in ethnography, ontology\(^3\), epistemology\(^4\) and methodology. The methodology tends to be qualitative rather than quantitative. Qualitative methods yield descriptive data which

\(^3\) In this ontological view, the basic elements of an organization are individuals and individual relationships, in which the individuals not only create the organization, they are the organization (Colville 1981).

\(^4\) The epistemological emphasis is placed on understanding the nature and patterning of symbols through which individuals interact and form their social reality (Preston 1982).
enables the researcher to see the world as the subject sees it (Preston 1982).

The fieldworker must display culture in a narrative, "a written report of the field work experience in self-consciously selected words" (Van Maanen 1988, 4). Ethnography is the result of field work, but it is the written report that must represent the culture, not the field work itself. Ethnography as a written product, then, has a degree of independence (how culture is portrayed) from the field work on which it is based (how culture is known). Writing an ethnography is desk work, not field work\(^5\) (Van Maanen 1988, 4). Furthermore,

The joining of field work and culture in an ethnography entails far more than merely writing up the results from making friends, staying sane and healthy, worming one's way into back regions, and taking good notes in the field. It is not a straightforward matter, however, because a culture is as much created by the writing as it determines the writing itself. To suggest otherwise reduces ethnography to method (Van Maanen 1988, 6).

The researcher relied on his intuition to make initial sense out of the volume of interview data, and codification brought structure to the ethnography by writing a chronology of the labor dispute and settlement. As a result of this process, recurrent themes and categories of bargaining power began to emerge. The concept of bargaining power was always the central theme around which the analysis would be formed.

\(^5\) "Ethnographies join culture and field work. Ethnographies are documents that pose questions at the margins between two cultures. They necessarily decode one culture while recoding it for another" (Van Maanen 1988, 4).
The form of ethnography chosen by the researcher is the most prominent, prevalent and recognized form of ethno-
graphic writing—the realist account of a culture. Van
Maanen (1988) describes such accounts as "realist tales"
which he says, "provide a rather direct, matter-of-fact
portrait of a culture, unclouded by much concern for how the
field worker produced such a portrait" (7).

The goal in this study was to produce an ethnography
which related what transpired in the 1985 labor dispute at
BIW from the perspective of the people who participated in
the negotiations. The focus of the ethnography was on
research from the inside wherein the participants tell their
view of how the parties came to an agreement.

As a final point worth considering, it was surprising
to the researcher to find such similarity in the accounts
provided by members of the union and management teams. On
reflection, the lack of contradictory perspective may be
attributed to the time lapse between the strike and the
conduct of this research. Undoubtedly, a considerable
amount of soul-searching about the outcome of the negotia-
tions conducted by both parties. What emerged was a social-
ly approved story in which a fair degree of consensus had
been arrived at. This is not surprising given the process
of rationalization that participants of settings engage in.
It is important to note, however, that such approved stories
nevertheless both shape perceptions of the past and guide
actions in the future.
APPENDIX E

LETTER SENT TO THE PRESIDENT/CEO OF

BATH IRON WORKS
July 15, 1988

Mr. William Haggett
President, Bath Iron Works
700 Washington Street
Bath, ME 04530

Dear Mr. Haggett:

As a Ph.D. candidate in Economics at the Whittemore School of Business and Economics, I am conducting research for a dissertation on labor-management relations in the U.S. shipbuilding industry. In addition to econometric modeling techniques, my dissertation topic also requires a historical case study of a recent labor-management settlement in the shipbuilding industry. My case study is on the labor dispute at BIW in the summer of 1985 and it will focus on all the various factors which weighed on the eventual settlement.

This letter is a request for your authorization to visit the shipyard this summer in order to talk on an informal basis with several members of your management staff. It would greatly benefit the objectivity of my research to be able to discuss labor-management issues directly with the people responsible for implementing shipyard policies. Your personal authorization would help to overcome managers' natural reluctance to talk to outsiders and it would also lead to a more honest dialogue.

During the visit, I will also be trying to understand more about the nature of the production process from ship design to delivery. In the spring of 1986, I conducted a brief, but informative, interview with Mr. Thomas Parnell BIW's personnel office.

I want to assure you of the strict confidentiality of this dissertation research. Dr. Jack Dabney of Exeter, New Hampshire, [603] 772-3955, has agreed to serve as a reference and confirm the validity of this study. References will also be provided by University of New Hampshire faculty members who are serving on my dissertation committee: Chairman, Professor Richard W. Hurd, [603] 862-3374, and Professor Gene Bocialetti, [603] 862-3346. When the dissertation is completed I will be glad to share the results with you as I anticipate some interesting findings.

Thank you for your consideration of this matter. I look forward to your response.

Sincerely,

Gregory Woodhead
Ph.D. Candidate
APPENDIX F

INTERVIEW SCHEDULES
INTERVIEW SCHEDULES

Introduction

1. The purpose of this research is to examine the process of wage-rate determination in the U.S. shipbuilding industry.

2. I am a graduate student finishing a Ph.D. in Economics at the Whittemore School of Business and Economics at the University of New Hampshire and my specialty area is labor economics and labor-management relations. In the course of researching contract settlements in the shipbuilding industry, I feel that it is necessary to explore the issues with the people who were actually involved in such negotiations.

3. I am here to get your perspective on labor-management relations at BIW. Could you try to cast your mind back to how you felt during the period of contract negotiations in the summer of 1985?

4. I will not be using a tape recorder, but hand-written notes will be taken during the course of the conversation.

5. Only statements that you wish to be part of the official record will be included in the research data. If you wish to make any statements "off the record," please indicate this desire and these statements will not be recorded nor used in the dissertation.

6. I want to assure you that the confidentiality of all data and records associated with your participation in this research will be fully maintained.

7. You may discontinue your participation at any time without prejudice or penalty. Do you have any questions of me at this time?
Questions for Management

1. What is the nature of your role regarding labor negotiations at BIW?
   a. What meetings do you attend?
   b. To whom are you responsible?
   c. What is the criteria for effective performance?
   d. How can you be most effective?

2. What were the negotiating goals of BIW and how do you identify these goals?
   a. What data do you consider when making a proposal? (comparative wages, consumer prices, financial condition of BIW)
   b. Are there other factors which influenced the level of your demands?

3. What were some of the negotiating tactics and strategies utilized by your team?
   a. What was your initial strategy and the response to union demands?
   b. How successful were they?
   c. If you had to do it over again, would you change any?
   d. How did personalities influence the negotiations?
   e. What factors provided you with the most leverage at the bargaining table?

4. What do you see as the benefits of meeting with the union in a formal or informal setting?

5. What issues provided the greatest source of conflict with the union in the summer of 1985?
   a. Wages and benefits
   b. Two-tier pay system
   c. Cross-trading
   d. BIW's refusal to release "cost information"
   e. Were there any other issues that provided a source of conflict?

6. To what extent were the negotiations affected by outside forces?
   a. What role did Congoleum play in the negotiations?
   b. What role did the Navy play?
   c. What role did the media coverage play?
   d. Were there other outside forces that affected the negotiations?
7. Why did the strike occur?
   a. How was the management response planned and coordinated?
   b. How was the tentative agreement reached?

8. What do you think of the agreement you negotiated?
   a. How successful were you in achieving your original goals?
   b. Were there any unresolved issues?
   c. How did the workers respond to the settlement?
   d. How did the settlement affect the 1988 negotiations?
Questions for Union Leadership

1. What are your duties as an officer in the union?
   a. What meetings do you attend?
   b. Who are you responsible to?
   c. How do you know if you have done a good job?
   d. How can you best do your job?

2. How do you identify what the union demands will be?
   a. What data do you consider when making a proposal?
      (comparative wages, consumer prices, financial condition of BIW)
   b. Are there any other factors that influenced the level of your demands?

3. What were some of the negotiating tactics and strategies utilized by your team?
   a. What was the initial strategy and the response to management actions?
   b. How successful were they?
   c. If you had to do it over again, would you change any?
   d. How did personalities influence the negotiations?
   e. What factors provided you with the most leverage at the bargaining table?

4. What do you see as the benefits of meeting with management in a formal or informal setting?

5. What issues provided the greatest source of conflict with the management in the summer of 1985?
   a. Wages and benefits
   b. Two-tier pay system
   c. Cross-trading
   d. BIW's refusal to release "cost information"
   e. Were there any other issues that provided a source of conflict?

6. To what extent were the negotiations affected by outside forces?
   a. What role did Congoleum play in the negotiations?
   b. What role did the Navy play?
   c. What role did the media coverage play?
   d. Were there other outside forces that affected the negotiations?
7. Why did the strike occur?
   a. What did you expect to accomplish?
   b. How was the strike activity organized?
   c. What was the role of the International Union?
   d. How was the tentative agreement reached?

8. What do you think of the agreement you negotiated?
   a. How successful were you in achieving your original goals?
   b. Were there any unresolved issues?
   c. How did the workers respond to the settlement?
   d. How did the settlement affect the 1988 negotiations?
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